Lacey City Council Worksession Agenda

Refer to the bottom of the agenda for meeting information.

Tuesday, July 28, 2026	6:00 PM	Council Chambers and Online

1. **Call to Order**
2. **Roll Call**
3. **Land Acknowledgement**

   We, the City of Lacey, are on the ancestral land of the Tribal People of the Treaty of Medicine Creek, including the Nisqually Indian Tribe and Squaxin Island Tribe. We acknowledge and remember those Tribal People not recognized today who were absorbed or relocated into other tribes for survival. We recognize the ancestors and their descendants who are still here. We recognize and respect the Tribal People of the Treaty of Medicine Creek as the traditional stewards of this land since time immemorial and their role today in taking care of these lands in perpetuity. We recognize and have the responsibility to call attention to the histories of dispossession, forced removal, and abridged treaty rights that allowed our nation, state, and city to develop as they have today. We recommend that community members read the Medicine Creek Treaty of 1854.
4. **Approval of the Agenda**
5. **Public Comment**

   Refer to the bottom of the agenda for instructions on how to provide public comment.
6. **Agenda Items**

   A. **Public Art Donation Policy**
   Shanelle Pierce, Special Projects Administrator

   B. **Stormwater Strategic Plan**
   Royce Young, Stormwater Permit Coordinator

   C. **Sidewalk Repair Project Overview**
   Vince McGowan, Interim Public Works Director

   D. **Sidewalk Capital Funding Strategy**
   Rick Walk, City Manager
   Troy Woo, Finance Director
   Vince McGowan, Interim Public Works Director
7. **Adjourn**

Meeting Information:

Attendance (Remote or in Person)

The public may attend the meeting in person, or you may view or listen to the meeting using one of the following platforms:

In Person:	Council Chambers at Lacey City Hall 420 College Street SE, Lacey, WA 98503
Zoom:	https://us02web.zoom.us/webinar/register/WN_KBOg2DhmQL-wFlYDMBe8Aw
Website:	https://cityoflacey.org/government/public-meetings/
Facebook:	https://www.facebook.com/cityoflacey
YouTube:	https://www.youtube.com/watch?v=kSRlOoc9Pg4
Phone:	(888) 788-0099 or (877) 853-5247 (Webinar ID 873 7262 2644)

Verbal Public Comment

Each speaker is limited to three minutes. Comments are welcome on matters connected to City business or specific agenda items.

Prior to starting your comments, please provide your:

a. Name
b. City of residence or connection to the City
c. Topic or subject matter of your comments

Those wishing to provide verbal public comment may do so in person or by Zoom:

In Person:	Use the sign-up sheet located in the Council Chambers.
Zoom:	Preregister using the following Zoom link no later than two hours prior to the meeting: https://us02web.zoom.us/webinar/register/WN_KBOg2DhmQL-wFlYDMBe8Aw Instructions and access details will be provided once registration is complete.

Written Public Comment

Public comments may also be submitted by email to PublicComment@cityoflacey.org. The commenting period will close two hours before the meeting time. Written comments will be provided to the City Council electronically prior to the meeting. Comments will not be addressed during the Council meeting; however, comments received will be added to the official record.

STAFF REPORT

Council Worksession
July 28, 2026

Subject:	Public Art Donation Policy Briefing
To:	Lacey City Council
Prepared by:	Shanelle Pierce, Special Projects Administrator
Department Director:	Shannon Kelley-Fong, Assistant City Manager
Reviewed By:	Not Applicable
Final Review:	Rick Walk, City Manager

Purpose: Briefing

Recommendation: Review only.

Brief: Propose updates to the existing Council Policies and Procedures Manual on 10.03 Public Art to include a new subsection on private donations from individuals or organizations. The proposal would add a subsection to section 10.03 with guidelines and minimum standards for expanding the public art collection through private donations. Building on the previous Council presentation, this briefing will emphasize maintenance responsibilities and approval thresholds.

Alternatives:

1. Direct staff to provide additional information at a future Worksession.
2. Direct staff to make additional changes before adopting the policy.
3. Some other option not contemplated in the above

Prior Review:

Commission on Equity – 3/23/2026 Link
Parks, Culture, and Recreation Commission – 4/1/2026 Link
Historical Commission – 4/15/2026 Link
Council Worksession – 4/28/2026 Link

Advisory Board Recommendation(s):

Commission on Equity - Approved a recommendation to adopt, with a modification
Parks, Culture, and Recreation Board - Approved a recommendation to adopt
Historical Commission - Approved a recommendation to adopt

Fiscal Impact:

Amount: Not applicable
Budgeted Item: No
Project Code: Not applicable
Funding Source: Not applicable

Attachments:

1. Public Art Donation Policy

Policy or Legal Alignment:

1. 10.03 Public Art Policy

Background: On June 9, 2011, the Lacey City Council adopted the Council Policies and Procedures Manual (Council Policy) to standardize the process for implementing current and new Council policies, practices, and procedures. From time to time, the Lacey City Council adopts amendments to the manual, including periodic updates to the Council Policy on 10.03 Public Art. Community organizations have shown interest in donating art, which highlighted this gap and led to the development of this policy. Currently, the policy does not address private donations from individuals or organizations.

Below is a summary of the proposed updates in **Attachment 1**:

Adds a subsection to the existing Council Policy 10.03 with guidelines and minimum standards for expanding the public art collection through private donations from individuals or organizations. The subsection includes:

- Outlines the purpose of the policy.
- Defines terms and phrases used in the policy.
- Establishes a process for considering proposals for private donations of public art.
- Defines criteria and conditions for acquiring donated public art.
- Clarifies procedures and roles involved in acquiring private-public art donations, including entering into maintenance agreements.

Between March and April 2026, the Commission on Equity, the Parks, Culture, and Recreation Board, and the Historical Commission recommended amendments to 10.03 adding a subsection that sets out guidelines and minimum standards for expanding the public art collection through private donations from individuals or organizations. The Commission on Equity requested one modification: language allowing the donor to reclaim a donated object if the City removes it for any reason. This change was incorporated into **Attachment 1**. Additionally, the Lacey Youth Council reviewed the policy on April 21, 2026.

On April 28, 2026, during a Council Worksession, staff briefed the City Council on proposed amendments to 10.03, which would add a subsection establishing guidelines and minimum standards for expanding the public art collection through private donations from individuals or organizations. Specific questions and concerns were centered around maintenance responsibilities of donated art. The City Council directed staff to provide additional information at a future Worksession.

On July 28, 2026, during the Council Worksession, staff will seek further guidance from the Council on maintenance responsibilities and approval thresholds for the proposed subsection. The discussion will focus on how the City plans to ensure proper maintenance and care of donated objects.

The Council will consider various options for handling maintenance responsibilities, including any combination of the following:

- City maintains all donated objects, regardless of their size, complexity, or location; or
- City maintains select donated objects based on factors such as scale, material, location, value, and vandalism risk; or

- City negotiates a one-time maintenance endowment with the donor for large or complex objects, based on factors such as scale, materials, location, value, and risk of vandalism; or
- Donors maintain the object themselves.

Staff reviewed maintenance endowment policies from other municipal governments and can provide additional detail on these policies, if necessary. To summarize the findings, each jurisdiction's policies are unique; however, notably, several of the city policies studied required an endowment and/or a maintenance agreement.

The proposed subsection sets the approval threshold at $7,500. Staff reviewed approval-threshold policies from other municipal governments and can provide additional details on these policies, if necessary. As above, there is variation in approval thresholds among jurisdictions; however, notably, a staff-level approval threshold was common.

*** DRAFT IN WORK ***

City of Lacey Public Art Donation Policy

1. **Purpose**
   This policy outlines the guidance and minimum standards the City will follow to expand its public art collection through private donations from individuals or organizations, enhancing the community's experience. This policy aims to create a clear, consistent, and transparent process for reviewing, accepting, installing, maintaining, and, if needed, removing donated works of art on City properties. The City seeks to ensure that donated objects serve the public interest, reflect community values, align with the City's public art policy, maintain artistic and technical quality, and do not create unfunded or unreasonable long-term obligations.

   Artists, donors, community organizers, and others interested in collaborating on a public art project may be eligible to participate by donating funds for public art acquisitions, commissioning new art, or contributing objects directly to the collection.

2. **Exclusions**
   This policy does not apply to donations covered in the Parks, Culture, and Recreation Department's Enhancements Program Policy. Such donations must be reviewed by the Parks, Culture, and Recreation Board in accordance with the Department's policy. Additionally, this policy does not apply to donations for the commemorative naming of public facilities or memorial roadways, which must follow the policy on naming public facilities and memorial roadways.

3. **Definitions**
   Unless otherwise specified by the context, the definitions below apply to the terms and phrases used in this document.

   "Acquisition" refers to adding objects to the City's permanent collection through commissioning, purchase, donation, or other means.

   "Appraisal" denotes a professional, certified evaluation of objects, including its authenticity, condition, and provenance, to determine its monetary value.

   "Artist" describes an individual recognized by peers, critics, and art professionals as consistently producing art, demonstrating a serious, ongoing commitment to the fine arts.

   "Bequest" is a gift or donation made through a will.

   "City" refers to the City of Lacey.

"City Council" refers to the Council of the City of Lacey as appointed at that time.

"City Manager" is the city's then-appointed city manager and/or their designee.

"City Manager's Office" is the City Manager's staff or another department designated by the City Manager.

"City Property" refers to City-owned or managed real property or related assets.

"Donation" refers to the voluntary transfer of art, a series of works of art, or a monetary gift to the City, intended for long-term public display and intended to transfer title of ownership to the City.

"Maintenance" refers to routine inspection and care of public art by the City or designee.

"Mural" refers to a large-scale painting or other object executed directly on or attached to a wall, street, or sidewalk.

"Object" is an original work of art in various media, including but not limited to any portable or permanently fixed sculpture, monument, mural, painting, drawing, earthwork, mixed media work, or time-based work (moving images or sound-based art), created by a professional artist or collaborative team.

"Public art" is an original object by an artist(s) that is publicly visible on a City-owned or managed site and intended to enhance the environment for community members.

"Site" refers to real property or land owned, leased, or operated by the City of Lacey.

4. **Process for Consideration**

A. **Donor submits a public art donation application.** A donor interested in donating art must submit a City-approved application to the City Manager's Office. The application should include, but is not limited to:
    a. A cover letter describing the donation, explaining how it aligns with the City's public art policy, and why it should be part of the City's Public Art Collection.
    b. Drawings, photographs, or models, showing details such as scale and materials. When appropriate, a small-scale three-dimensional model may be requested. Photos of models will be kept with the application, and all physical models will be returned after review, regardless of the application outcome. If an artist or applicant does not pick up the model within 30 days, it may be disposed of.

c. Artist's resume.
d. Installation details — including engineered plans, if needed — may be required by the City. The City will require the applicant to bear the associated costs.
e. Description of routine maintenance and an estimate of annual and long-term maintenance costs.
f. Estimated value for insurance purposes.
g. Budget and preferred schedule.
h. The applicant's preferred site location, if known.
~~i.~~ The applicant's level of interest in retrieving the object if the City decides to remove it for any reason.

Other materials may be requested at the City's determination.

B. **Initial review.** The City Manager's Office will acknowledge receipt of the proposal. They will then review the proposal to determine if the application meets the selection criteria and public art objectives. If additional information or clarification is needed, the City will reach out to the applicant. This information should be provided within two weeks or within another timeframe mutually agreed upon to support a timely, collaborative review process.

C. **Internal preliminary technical review.** Once the City Manager's Office verifies that the proposal meets public art criteria, it is forwarded to the appropriate City departments, including but not limited to Parks, Culture, and Recreation; Public Works; and Community and Economic Development, for preliminary technical assessments and risk reviews. These reviews shall consider public safety, installation feasibility, maintenance requirements, and structural stability. The proposal must comply with any and all applicable safety standards (including the Americans with Disabilities Act), be structurally sound, and integrate appropriately with surrounding infrastructure, such as landscaping, utilities, and lighting.

D. **Acceptance or rejection decision**. All decisions to accept or reject public donations are in the sole discretion of the City. For donations of $7,500 or less, the City Manager shall make the final decision. The City Manager may seek recommendations and input from an Advisory Board before making that decision and may bring it to the City Council for final approval.

For donations of over $7,500, the City Manager's Office will seek review by an art committee. If no art committee is in place, an Advisory Board designated by the City Manager's Office will review the proposal and provide a recommendation to the City Manager's Office. Additional reviews by other Advisory Boards may also be required. The City Manager's Office will then present its findings, recommendations, and input from the Advisory Boards and community to the City Council for a final decision. If,

after receiving this recommendation, the Council may, at its discretion, gather additional community feedback before making its final decision.
The City Manager's Office will notify the applicant of any decision.

E. **Donation agreement**. If the proposal is approved, the applicant and the City will sign a memorandum of agreement (MOA) outlining the conditions for donation. The MOA will include, among other things, requirements on:
    a. selection and design of the site, including all technical reviews and permits required by City, State, or Federal regulations
    b. maintenance responsibilities
    c. a project timeline for completion
    d. a professional appraisal by a qualified conservator of public art for insurance purposes
    e. the object's expected lifespan and anticipated display period
    f. if feasible, the conditions under which the object can be returned if the City removes it and the donor requests its return

If the donor and the City are unable to reach an agreement on the terms of the MOA, the acquisition process ends. The City Manager or the City Council will be notified. The applicant can appeal the decision to terminate the acquisition process to the City Council.

5. **Selection Criteria for the Acquisition of Donated Public Art**

A. All objects approved by the City for the City's public art collection must satisfy the following criteria:
    a. **Clear title**. Objects proposed to be transferred to the City by title must be conveyed with a clear title. Objects that are gifted, donated, deeded, or contributed to the City must be accompanied by a deed of gift.
    b. **Original art and authentication**. Only original objects may be donated to the City's public art collection. Copies or reproductions, whether authorized or not, will not be considered. Donors are responsible for establishing the object's authenticity. If the City Manager's Office is not satisfied with the object's authenticity, the City Manager's Office may request additional information from the donor and will take reasonable steps to confirm the object's authenticity.
    c. **Reflects community values and forum disclaimer.** The City reserves the right with or without cause to decline any object or donated materials and may decline any proposals that are inconsistent with the community's values and character or include overt advertising, religious references, sexual content, negative imagery, or political partisanship. All submissions must be inclusive, culturally sensitive, and respectful of all community members, and must comply with applicable laws, including copyright, intellectual property,

and local regulations. Acceptance of a donation does not create a public forum, and the City retains sole discretion over the display, use, or removal of the donated objects. This determination is made to ensure public safety, maintain community harmony, and protect the integrity of public sites.

d. **Free of advertising or promotional content.** The object or identifying plaque must not include advertising or promotional content relating to living individuals or to organizations, institutions, or businesses currently in operation. A plaque that accompanies the object and displays the name of the donor, artist, or artwork will not be considered advertising.
e. **Restrictions**. Objects added to the City's public art collection must be given with no contingencies or obligations. The City may make reasonable efforts to recognize the artists and donors.
f. **Suitability**. The City will not accept objects that cannot be displayed, sustainably maintained, and securely protected.

B. **Attributes**. The City considers the following attributes when acquiring objects for inclusion in its collection:
   a. **Artistic excellence**. The originality and aesthetic quality or value of the object should be comparable to or exceed those of pieces already in the collection and would contribute to the collection's overall diversity and quality.
   b. **Condition**. The object must be in good condition.
   c. **Durability**. The object's materials, finishes, and construction should be chosen to ensure lasting quality and to resist vandalism.
   d. **Local artist**. A strong preference is given to objects created by local artists from the greater Puget Sound area. The artist's credentials, reputation, and quality of their work will be evaluated.
   e. **Maintenance**. Because the City must be able to provide proper storage and care, no objects requiring extensive or extraordinary preservation and care will be accepted.
   f. **Safety**. Objects should be safe for people interacting with them. Safety conditions and factors that may affect liability must be considered, and objects should also be designed to comply with the Americans with Disabilities Act and related federal, state, and local codes.
   g. **Site specific**. Objects must be appropriate for the selected site. The City makes the final decision on the location of the object's display.

6. **Maintenance Responsibilities**
   Funding to maintain the City's public art collection is limited. Therefore, donors are required to sign a maintenance agreement and/or establish a maintenance endowment when donating to ensure proper care.

The donor shall provide a contribution to a maintenance endowment fund equal to a maximum of 10% of the value of the object, as determined by a qualified appraiser approved by the City, or an amount mutually agreed upon by the City and the donor.

However, the City may, on a case-by-case basis, accept an agreement from a donor to maintain objects in perpetuity and in accordance with City standards rather than a cash contribution to an endowment fund; however, this will require the City to incur additional effort and cost. For any case-by-case donor maintenance agreement, the City will require an up-front deposit to cover at least one year's maintenance of the object to protect the City against future default.

7. **Conditions**

Art ownership and use. Donors must agree that once their donations are accepted, all items included in the City's public art collection automatically become the exclusive property of the City. If there are no restrictions, these works may be displayed, loaned, retained, or disposed of in a manner that the City determines best serves the collection. Accepting donated objects does not guarantee permanent installation and may be subject to removal or relocation at a later time.

Appraisals. The City does not provide art appraisals. The IRS requires a written appraisal from a qualified appraiser for donations exceeding $5,000.

Compliance with laws. All objects donated shall comply with all applicable local, state, and federal laws.

DRAFT

STAFF REPORT

Council Worksession
July 28, 2026

Subject:	Stormwater Strategic Plan
To:	Lacey City Council
Prepared by:	Royce Young, Stormwater Permit Coordinator
Department Director:	Vince McGowan, Interim Public Works Director
Reviewed By:	Ryan Jewell, Stormwater Engineering Manager
Final Review:	Rick Walk, City Manager

Purpose: Briefing

Recommendation: No recommendation at this time.

Brief: Lacey Water Resources is updating the 2020 Stormwater Comprehensive Plan, to be renamed the 2026 Stormwater Strategic Plan (SSP). The SSP will guide the Stormwater Utility's programs for compliance with state permit requirements, and proposed projects to address water quality, flood reduction, and related goals. The Planning Commission was briefed on March 11th, June 10th, and a Public Hearing was held on July 22nd. Public involvement included an open house workshop, posting to online platforms, the City's social media accounts, and City & Stream Team publications.

Alternatives:

1. No change: Continue as is.
2. Direct Staff to make additional changes to the draft plan.
3. Some other option not contemplated in the above.

Prior Review:

Planning Commission – 6/10/2026 Link
Planning Commission – 3/11/2026 Link

Advisory Board Recommendation(s):

Planning Commission Recommendation of Approval (July 22).

Fiscal Impact:

Budgeted Item: Yes

Attachments:

1. Lacey_SSP_Council Review Draft
2. Lacey_SSP_Appendices

Policy or Legal Alignment:

1. Comprehensive Plan
2. State/Federal Permit Requirement

Background:

The City of Lacey adopted its first-ever comprehensive plan for its Stormwater Utility in 2013. The first update to the Stormwater Comprehensive Plan was completed in 2020, and we are now updating that plan to create the 2026 Stormwater Strategic Plan (SSP).

The 2026 SSP has three main purposes:

(1) to provide a multi-year plan to guide the programs, activities, and projects of Lacey's Stormwater Utility;
(2) to ensure continued compliance with evolving regulatory mandates; and
(3) to provide information and transparency to our utility ratepayers.

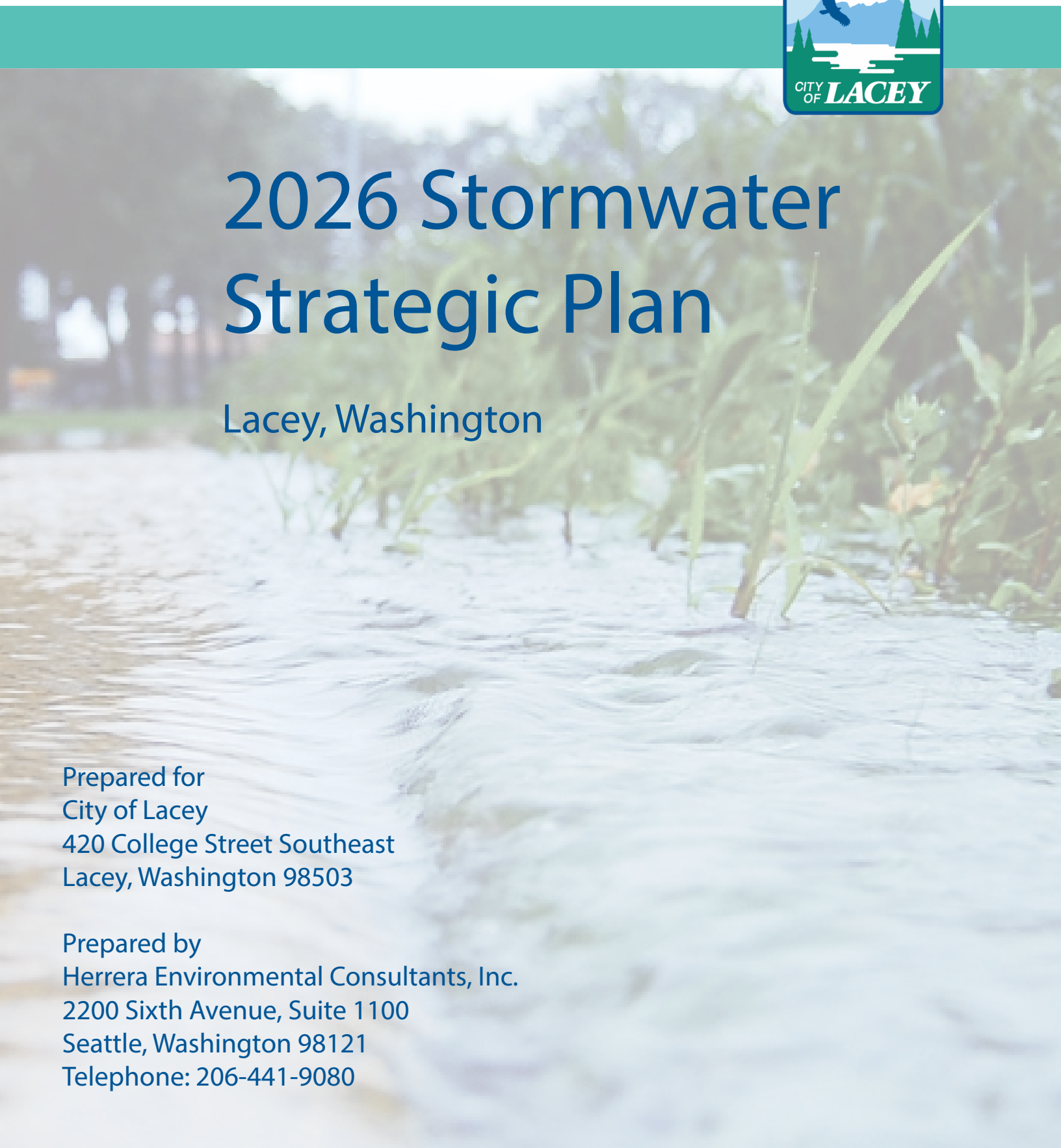
Two driving factors informed the SSP update project. The first driving factor is to ensure the stormwater utility's long-term goals are aligned with the overall City of Lacey Comprehensive Plan. The second driving factor is a collection of new requirements mandated by the 2024-2029 Western Washington National Pollutant Discharge Elimination System (NPDES) Phase 2 Municipal Stormwater Permit. The Permit, which applies to 90 cities and 5 counties in western Washington, imposes a variety of requirements that are phased-in with set deadlines during the 5-year permit term. Each permittee, including Lacey, is required to develop an overall Stormwater Management Program consisting of programs and activities to control stormwater discharges and reduce the impacts of stormwater on surface and groundwaters.

The 2026 SSP includes an update to the Stormwater Capital Improvement Program (CIP) plan, with projects proposed to reduce flooding and water pollution. The SSP also includes an updated Stormwater Utility financial analysis of anticipated expenditures and revenue requirements to support SSP implementation.

The intent of the 2026 SSP update is to create a document that is both informative and interesting for Lacey residents to read, with abundant use of color, graphic elements, photos, and local highlights. The 2026 SSP will be available on the City website.

The initial draft SSP was reviewed by internal staff in early April, followed by a public review draft in May-July, a public hearing was held on July 22nd, and the final draft will be ready in early August. The goal is to include the 2026 Stormwater Strategic Plan with the City of Lacey's annual Comprehensive Plan amendments that will be presented to Council in late summer or early fall of 2026.

Council Review Draft
July 6, 2026



2026 Stormwater Strategic Plan

Lacey, Washington

Prepared for
City of Lacey
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Lacey, Washington 98503

Prepared by
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ACKNOWLEDGMENTS

Land Acknowledgment

We acknowledge the ancestral land we are on today as the traditional territory of the Tribal People of the Treaty of Medicine Creek, signed in 1854, including the Nisqually Indian Tribe and Squaxin Island Tribe.

We acknowledge, remember, and must not forget those Tribal People that are named but not recognized today, and who were absorbed or relocated into other tribes for survival. We recognize the ancestors and their descendants who are still here.

We acknowledge, Indigenous People who called the land home before the arrival of settlers and have been here Since Time Immemorial.

We recognize the relationship that exists between Indigenous People and their traditional territories, which include the religious significance, self-determination, identity, and economic factors. The relationship helps all people heal from the past and learn how not to inflict new wounds today.

We recognize and respect Indigenous People as traditional stewards of this land, and acknowledge the Tribal Governments and their role today in taking care of these lands. We recognize that this land acknowledgment, and the Nisqually-Lacey Accord of 2011, are small steps toward true allyship. We commit to partnering with the Tribal People of the Treaty of Medicine Creek to continue to uplift the voices, experience, and histories of indigenous people of this land and beyond.

We recognize and have the responsibility to call attention to the histories of dispossession, forced removal, and abridged treaty rights that allowed our nation, state, and city to develop as it has today.

We recommend that community members read the Medicine Creek Treaty of 1854.

ACKNOWLEDGMENTS

This Stormwater Strategic Plan was produced through the combined efforts, ideas, and cooperation of the following Lacey City staff, appointed and elected officials, and consultants.

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Community and Economic Development

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Malcolm Miller (Deputy Mayor)

Lenny Greenstein

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Nicolas Dunning

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Matthew Fontaine	CIP Lead and Principal In Charge

FCS, a Bowman Company

Tage Aaker	Financial Analysis Project Manager
Amanda Levine	Financial Analysis Assistant Project Manager
Sachin Goradia	Financial Analysis Consultant
John Ghilarducci	Financial Analysis Principal In Charge

ACRONYMS & ABBREVIATIONS

ADU	Accessory Dwelling Units
BMP	Best Management Practice
CARA	Critical Aquifer Recharge Area
CIP	Capital Improvement Program
DNR	Department of Natural Resources
Ecology	Washington State Department of Ecology
ERTS	Environmental Reports Tracking System
ESA	Endangered Species Act
FTE	Full-time Equivalent
GIS	Geographic Information System
GMA	Growth Management Act
H&H	Hydrologic and Hydraulic
HOA	Homeowners Association
IDDE	Illicit Discharge Detection & Elimination
Lacey	City of Lacey
LID	Low Impact Development
LMC	Lacey Municipal Code
LOTT	Lacey, Olympia, Tumwater, Thurston County
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PCBs	Polychlorinated Biphenyls
Phase II Permit	National Pollutant Discharge Elimination System Phase II Municipal Stormwater Permit
PSCIC	Professional Source Control Inspector Certification

PSP	Puget Sound Partnership
RCW	Revised Code of Washington
REEP	Regional Environmental Education Partnership
SCP	Stormwater Comprehensive Plan
SDM	Stormwater Design Manual
SMAP	Stormwater Management Action Plan
SMED	Stormwater Management for Existing Development
SOP	Standard Operating Procedure
SSP	Stormwater Strategic Plan
SWPPP	Stormwater Pollution Prevention Plan
SWMP	Stormwater Management Program
TMDL	Total Maximum Daily Load
TRPC	Thurston Regional Planning Council
UGA	Urban Growth Area
UIC	Underground Injection Control
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WHPA	Wellhead Protection Areas
WRIA 13	Water Resource Inventory Area 13
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

This update of the City of Lacey's (Lacey) Stormwater Strategic Plan (SSP; formerly known as the Stormwater Comprehensive Plan [SCP]) is intended to guide Lacey's Stormwater Utility programs and projects for the next nine years. This plan is the second major revision of Lacey's Stormwater Strategic Plan since the original 2013 Stormwater Comprehensive Plan (Lacey 2013). In addition to detailing Stormwater Management Program (SWMP) activities and projects for the 9-year planning horizon (2027 through 2035), this plan describes SWMP goals and accomplishments; the development and organization of this plan; background information including descriptions of waterbodies, stormwater infrastructure, climate change considerations, and regulatory environment; and proposed programs, policies, and activities to meet Lacey's long-term goals for the SWMP.

College Regional Stormwater Facility Aerial

1.1 Purpose of this Plan

The purpose of this plan is to guide Lacey's SWMP in a manner consistent with applicable local, state, and federal regulations while charging consumers an equitable stormwater utility rate and supporting the goals and policies expressed in the City of Lacey and Thurston County Joint Plan (Lacey and Thurston County 2023) for Lacey's Urban Growth Area (UGA) and City of Lacey Comprehensive Plan (Lacey 2025). This SSP includes:

- Long-term goals of the SWMP
- Summary of background information relevant to the SWMP
- Identification of and proposed solutions to flooding and water quality issues
- Actions necessary to ensure compliance with applicable federal, state, and local requirements, especially the Western Washington National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit (Phase II Permit) issued by the Washington State Department of Ecology (Ecology)
- A financial plan to address the two items above

Since most land within the city is developed, most of the identified issues are a result of:

- Uncontrolled runoff from development that occurred prior to the implementation of modern stormwater requirements
- Aging infrastructure
- Regulatory mandates

Woodland Creek

1.2 Program Elements and Long-term Goals

All functions performed or influenced by the SWMP can be divided into nine major program elements, which are listed in bold below. Lacey staff developed long-term goals for each program element of the SWMP, which are listed under the applicable program element. Policies related to these long-term goals are provided in Appendix A.

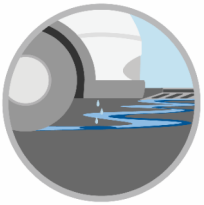
Flood Reduction: There is no flooding of the public stormwater system from the 100-year storm.

Surface Water Quality Improvement: All surface waterbodies in Lacey meet water quality criteria for designated recreation and fish uses.

Groundwater Protection and Recharge: Groundwater quality and quantity is not negatively affected by stormwater practices.

Habitat Improvement: Aquatic species thrive in and along surface waterbodies in Lacey.

Public Participation (Education, Outreach, and Involvement): City residents understand how their actions and choices affect stormwater, and they act in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.



Pollutant Source Control: Pollutants do not enter stormwater, groundwater, or surface waterbodies.

Infrastructure Operations and Maintenance: All stormwater infrastructure operates as intended.

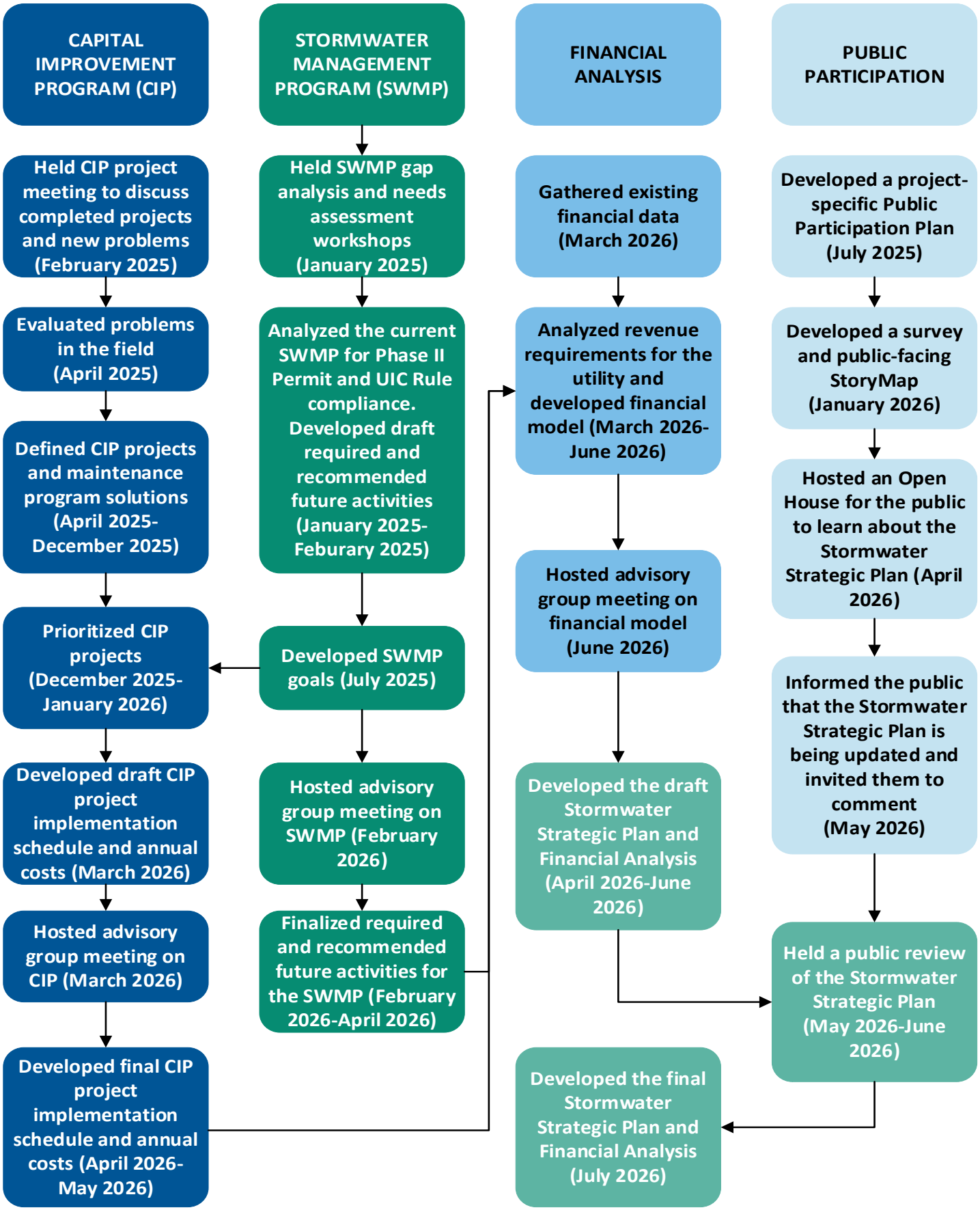
Development Practices: Runoff from developed areas mimics forested hydrology and water quality. Equitable service is provided to applicants for development projects.

Stormwater Planning, Administration, and Funding: Revenue is wisely invested and produces measurable positive outcomes, including regulatory compliance. Utility rates are fair and equitable.

1.3 Stormwater Strategic Plan Development

Lacey staff and consultants conducted detailed analyses to support the conclusions and recommendations in later chapters of this plan. The analyses included interviews with Lacey staff, a gap analysis and needs assessment, field review of problem sites, hydrologic modeling, development of construction projects to solve stormwater problems (i.e., Capital Improvement Program [CIP] projects), and calculation of funding needs to implement this plan. Past studies and plans were reviewed to gather information on drainage and water quality issues and to evaluate the existing SWMP. To supplement existing drainage and water quality information and recent documentation of the status of Lacey's SWMP, Lacey staff participated in advisory group meetings and provided input throughout the development of this plan.

The flowchart below illustrates the process that was used to develop this plan.



1.4 Stormwater Management Program Accomplishments

Since the Stormwater Utility was founded in 1985, Lacey has made significant progress in reducing detrimental effects of stormwater runoff on receiving waters in and around the city. Lacey has built many capital projects to alleviate drainage problems and has analyzed other problems to identify future activities. Lacey has also adopted ordinances, provided public education, and implemented monitoring programs to address water quality concerns. Since the development of the Stormwater Comprehensive Plan in 2020 (Lacey 2020), Lacey has implemented the following significant projects, programs, and policies:

Regional Facility Projects

Westminster Pond Rehabilitation Project

In 2023, two regional stormwater facility projects were completed:

- The Westminster Pond Rehabilitation project, shown on the left, involved cleaning out and refurbishing a 20-year-old regional stormwater pond in a residential neighborhood. The work included installing a pre-treatment device to reduce pollutant loading into the pond, which discharges to College Creek. The project cost was approximately $235,000.
- The Woodland Creek Stormwater Treatment Facility Oil-water Separator Replacement project involved removal of a trouble-prone coalescing-plate structure and retrofitting with a pre-treatment device upstream of the facility, which discharges to Woodland Creek. The project cost was approximately $330,000.

Stormwater Management Program

Schwarze A7 Tornado High-efficiency Street Sweeper on Lacey Street

Construction of a Rock Splash Pad

Reorganization

In October 2023, Lacey reorganized the Public Works - Water Resources Division to create a new Stormwater Section. The reorganization included moving some Operation and Maintenance staff into Water Resources, promoting the senior stormwater engineer to become the stormwater section supervisor, and hiring a new stormwater permit coordinator position. The reorganization and formal creation of the Stormwater Section enhances Lacey's ability to manage stormwater programs and address permit requirements and recordkeeping in a more organized fashion.

Permit Reissuance and Response

- In 2024, the Phase II Permit was reissued with various new and expanded requirements and deadlines for compliance. Lacey staff continued the development and implementation of the Stormwater Management Program (SWMP), including 12 sub-programs and other components.
- In April 2024, Lacey added a new staff position as the Source Control Program lead, to address state requirements to prevent and reduce pollutants in runoff to the municipal storm system. In June and July 2024, more than 3,000 letters were sent to all businesses in Lacey, introducing the new Source Control inspection and assistance program. In the latter half of 2024, a total of 650 businesses were inspected under the new program.
- In 2025, Lacey inspected a total of 368 businesses under the source control program.

Controlling Runoff from Development and Construction Sites

In 2022, the City of Lacey Stormwater Design Manual (SDM) was updated, adopted, and implemented for the control of runoff water from new development, redevelopment, and construction sites (Lacey 2022). The 970-page manual includes core requirements for stormwater management, design data, submittal criteria, maintenance standards, and other information. The SDM applies to both public and private projects.

Stormwater Management Program Continued

In 2025, Lacey added a new Engineering Technician position to support erosion and sediment control inspections on capital projects and public facility inspections for Lacey Fire District 3 and North Thurston Public Schools. This position conducted 21 capital projects inspections and 16 public inspections in 2025.

Private Facilities Inspection & Maintenance

Privately-owned Stormwater pond that Requires Inspection and Maintenance

- In 2021, Lacey staff conducted 53 residential (Homeowners Association [HOA]-owned) facility inspections.
- In 2022, Lacey staff conducted 14 residential (HOA-owned) facility inspections (note that staff changes affected this period).
- In 2023, Lacey staff conducted 67 residential (HOA-owned) facility inspections, 19 field visits to confirm that neighborhoods do not have stormwater facilities requiring maintenance, and 30 field meetings.
- In 2024, Lacey staff conducted 22 residential (HOA-owned) facility inspections, 28 field meetings, and 705 commercial facility inspections.
- In 2025, Lacey staff conducted 88 residential (HOA-owned) facility inspections, 32 field meetings, and 289 commercial facility inspections.

Illicit Discharge Detection & Elimination (IDDE)

Auto Accident that Requires Spill Response and Cleanup

Trainings:

- In 2023, Lacey provided IDDE training to 93 field staff from various departments.
- In 2024, Lacey provided IDDE training to 58 field staff from various departments.
- In 2025, Lacey provided IDDE training to 21 field staff from various departments.

Spills Responded to and Ensured Cleanup Occurred:

- In 2020, 95 reported spills were addressed.
- In 2021, 120 reported spills were addressed.
- In 2022, 142 reported spills were addressed.
- In 2023, 147 reported spills were addressed.
- In 2024, 151 reported spills were addressed.
- In 2025, 97 reported spills were addressed.

Earth Day Work Party in 2025

Oyster Planting Event in 2024

Outfall Monitoring:

- In 2025, 32 Lacey-owned outfalls were inspected and screened for illicit discharges and connections.

These spills include car accidents, spills reported via the spill response hotline, and spills reported through the Environmental Reports Tracking System (ERTS).

Education and Outreach:

- Since 1990, Lacey has participated in the regional Stream Team program, as a tool for local outreach and education. Stream Team involves community members in the protection and enhancement of local water resources, with field training and hands-on activities such as amphibian monitoring, Habitat at Home, and Marine Creature Mondays on the shores of Puget Sound.
- In 2024, Stream Team volunteers contributed 859 hours in Lacey and more than 4,000 hours county-wide on activities such as habitat restoration, stream monitoring, and storm drain marking. Lacey hosted 45 volunteers to honor Martin Luther King Jr. Day and 202 volunteers in observation of Earth Day.
- In 2024, Lacey participated in major public outreach events, engaging more than 2,000 community members in events that included Lacey Fun Fair, Children's Day, Nisqually Watershed Festival, Thurston County Fair, Squaxin Island Tribe's Festival of the Steh-Chass, and other events.
- In October 2024, Lacey piloted a 3-day outdoor field trip for 7th and 8th grade Komachin Middle School science students to learn about native plants and how different people interact with outdoor spaces.
    - During the 2024-2025 academic year, Lacey, in partnership with South Sound Green, reached 544 students and 20 teachers to educate students in water quality monitoring and best practices.
- In 2025, Lacey partnered with Washington Department of Fish and Wildlife (WDFW) to offer a Habitat at Home workshop, to educate participants on installing native plants in their yards, to promote stormwater pollution prevention and healthier habitats. 32 people participated in this workshop and received plants and plans to take home to help implement behavior change.

1.5 Public Involvement and Participation Conducted for this Plan

Lacey encourages the public to contribute to the Stormwater Strategic Plan (SSP) update. Lacey has developed and is implementing a Public Participation Plan to create multiple opportunities for the public to get involved. The first few steps in the public involvement process included a survey and public-facing StoryMap developed in January 2026, briefing Lacey's Planning Commission on March 11, 2026, and Open House on April 6, 2026. Multiple opportunities are being provided for public input prior to plan adoption, including:

- State Environmental Policy Act and notification to the Washington State Department of Commerce (May 2026)
- Draft SSP posted for public review (May-July 2026)
- Planning Commission briefing (June 2026)
- Planning Commission public hearing (July 2026)
- City Council meeting (July 2026)
- City Council adoption (August - September 2026)

The final SSP will be provided on Lacey's website following approval by City Council.

1.6 Plan Organization

This plan is organized into five chapters:

1. An introduction to this plan and the SWMP
2. A discussion of background material that is relevant to the SWMP
3. A description of the SWMP and activities required to comply with regulations and make progress towards defined long-term goals
4. A description of stormwater CIP projects developed to address citywide and site-specific stormwater problems
5. Instructions for implementing this plan and SWMP activities and projects, including adjustments to the stormwater utility rates

Appendices to this plan provide more detailed background information, calculations, and data related to this plan's recommendations

2.0 BACKGROUND

This chapter describes the environment in Lacey that affects stormwater management, waterbodies within the city limits and the Urban Growth Area (UGA) that receive surface water or stormwater from within the city limits, climate change considerations, applicable regulations, and a brief history of the Stormwater Utility Fund. Lacey is located at the southern tip of Puget Sound and is bordered to the west by the city of Olympia. Unincorporated areas of Thurston County border the city limits to the north, east, and south.

The city limits encompass approximately 20 square miles, and the current population is 60,380 (Thurston Regional Planning Council [TRPC] 2025). Since the 1960s, Lacey has ranked among the fastest growing communities in the region (Lacey and Thurston County 2023). As the city expanded its boundaries and experienced steady residential and commercial development, the extent of impervious surfaces also grew substantially. The increase in paved and built areas has amplified stormwater runoff, intensifying demands on Lacey's stormwater infrastructure and underscoring the importance of maintaining a resilient and adaptive SWMP. The relationship between land use and stormwater is discussed further in Section 2.1.

Central Lacey Circa 1963, Prior to Incorporation as a City

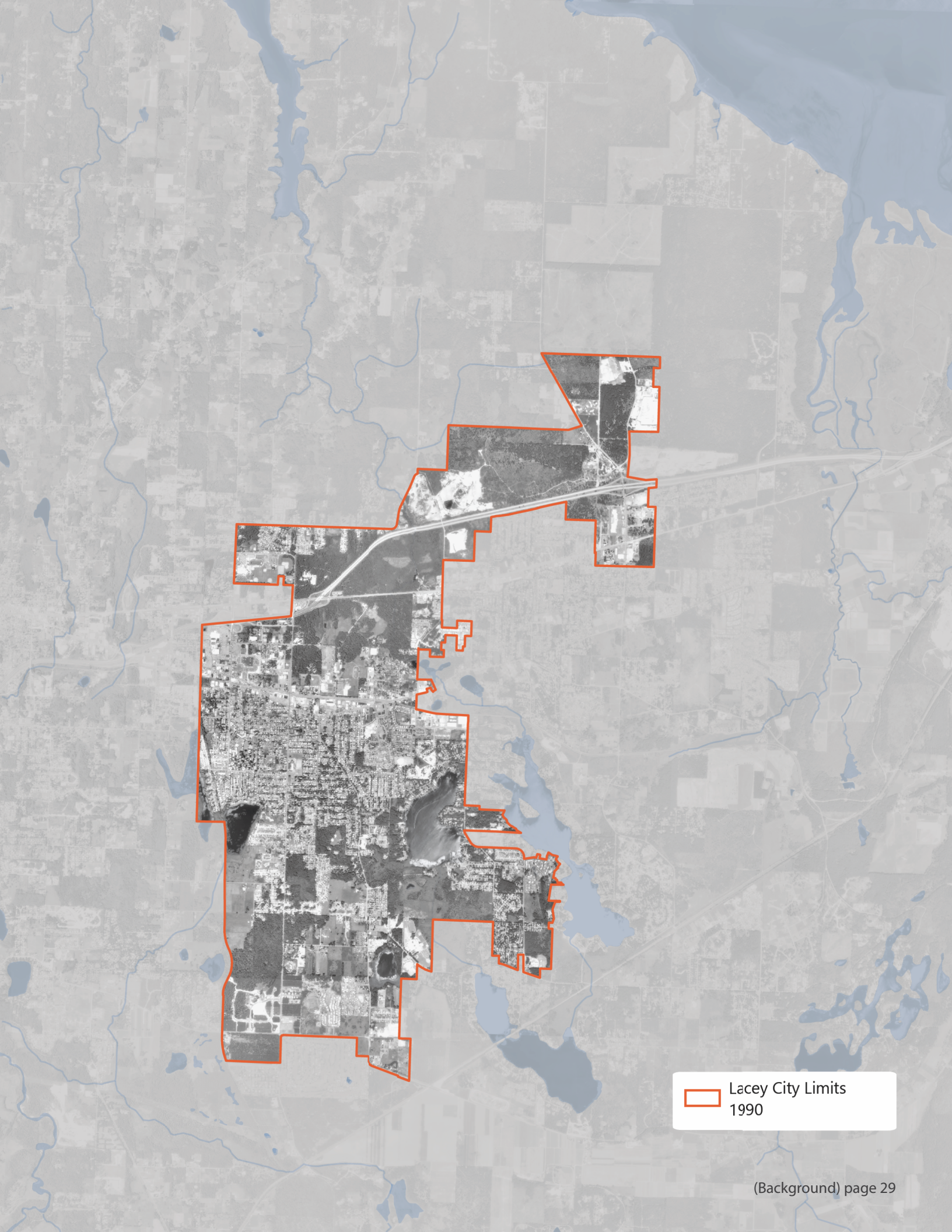
2.1 Land Use

Land uses in Lacey reflect a small-town heritage modified by more recent residential and commercial development. City growth and changes in land use are guided by the City of Lacey Comprehensive Plan (Lacey 2025), which was developed to comply with the requirements of the Growth Management Act (GMA), though Lacey has been doing non-mandated planning since 1983. One of the goals of the GMA is to promote development inside the municipal Urban Growth Area (UGA), which was designated as part of Lacey's land use plan that was adopted in 1994, to eliminate costly and environmentally damaging urban sprawl. This means that within the city limits the focus will be on redevelopment and infill development. Lacey has identified prime areas for commercial and residential redevelopment, which include, but are not limited to:

- Commercial Redevelopment Areas: old South Sound Center mall (west side of Sleater-Kinney Road) and the Martin Way East corridor (from Carpenter Road eastward)
- Residential Redevelopment Areas: south of Pacific Avenue between Sleater-Kinney Road and Carpenter Road, particularly near the College Street and Ruddell Road corridors, and near (just south of) Pacific

In addition to redevelopment, Lacey is experiencing infill development in residential areas. One example of infill development is the use of accessory dwelling units (ADUs). These ADUs increase density and the amount of housing options in Lacey while also increasing the amount of impervious surfaces on residential lots. The increase in impervious surfaces is expected with a growing population and economy, further emphasizing the need for a resilient and adaptive SWMP.

Figure 2-1. Aerial of Lacey City Limits Circa 1990.



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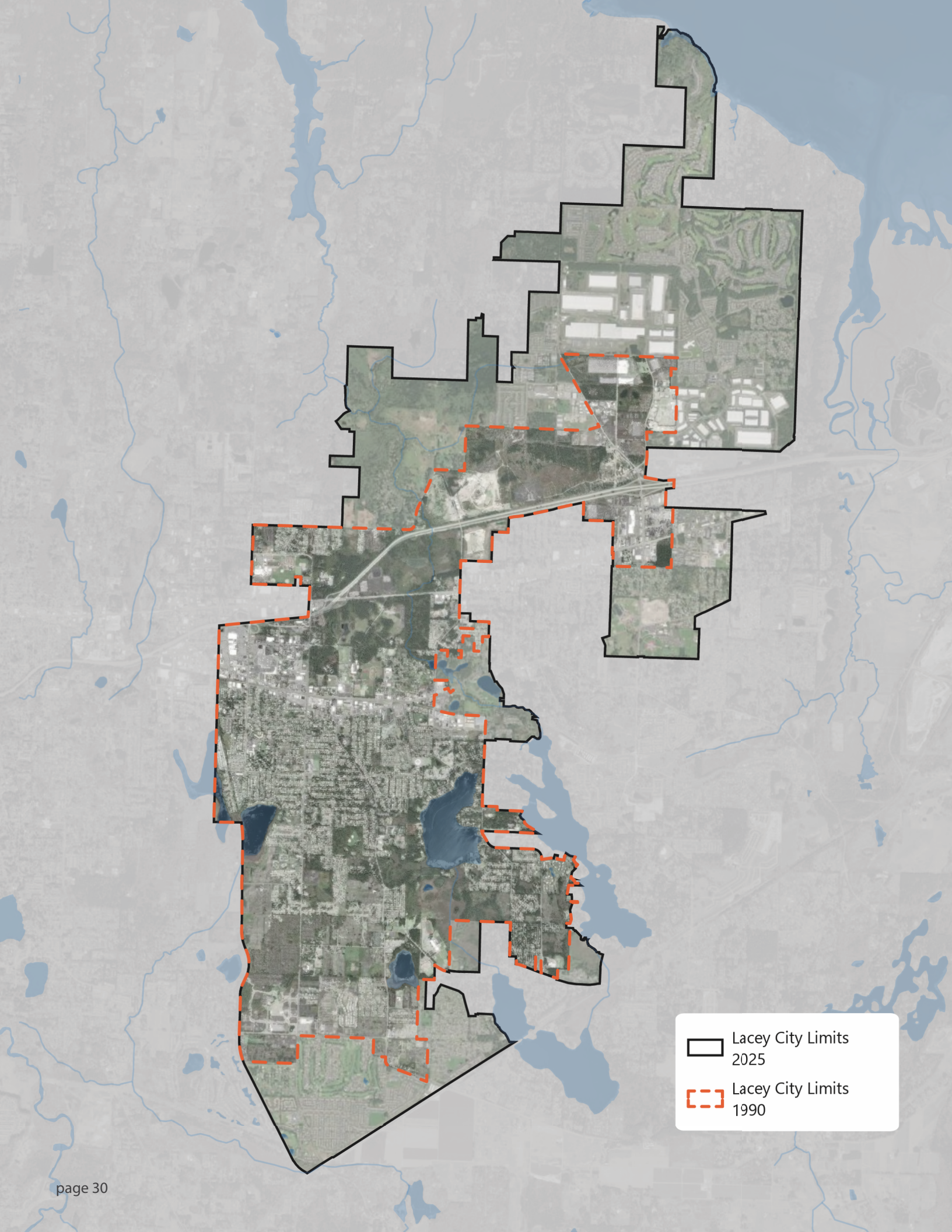

Lacey City Limits 2025
Lacey City Limits 1990

As these development, redevelopment, and infill development projects occur, developers will be required to comply with the Lacey Municipal Code (LMC) and Stormwater Design Manual (SDM). The SDM includes increasingly stringent standards for low impact development (LID) practices, on-site infiltration, stormwater treatment, and flow control. Therefore, it is expected that, over time, these new projects are likely to have a net benefit on stormwater management as more of Lacey is brought under the umbrella of contemporary stormwater management strategies.

Likewise, as Lacey annexes area inside the UGA, stormwater management services will need to be expanded to the new area to remain in compliance with the Phase II Permit. This, too, will result in more stormwater control, but will also increase the need for maintenance staff and equipment. Within the unincorporated UGA, development of undeveloped land will continue to occur (Lacey 2025). These greenfield developments will also be required to manage stormwater in accordance with the LMC and SDM. Many of these greenfield properties have been developed and the greenfield areas remaining typically have poor drainage, which requires more technical expertise in hydrology during development review.

Figure 2-2. Aerial of Lacey City Limits Circa 2025.

2.2 Soils and Groundwater

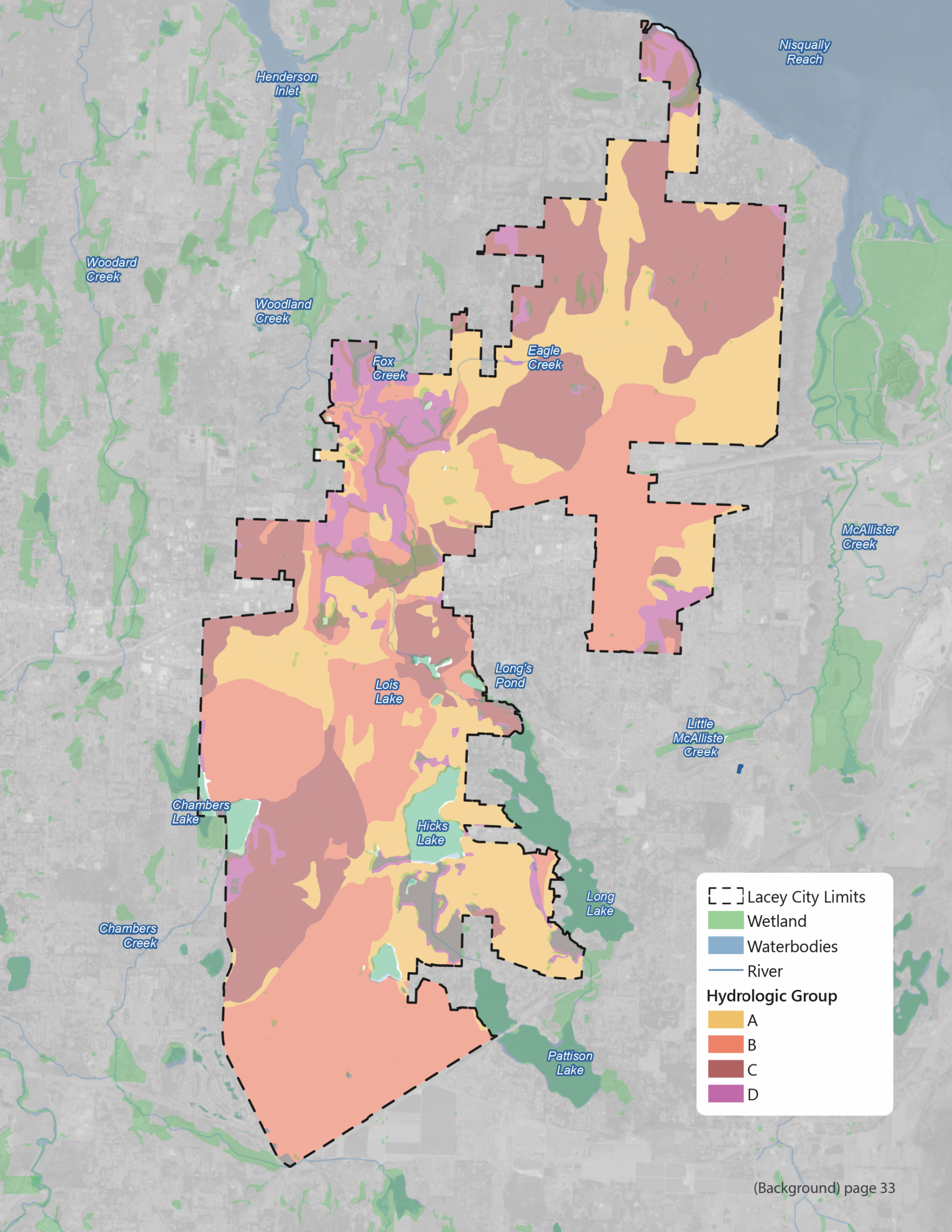
Soils within Lacey are typical for the south Puget Sound Region, consisting of well-drained glacial outwash, intermixed with zones of glacial till and wetland peat bogs. Most of the city is dominated by Hydrologic Soil Groups A and B, which are soils that generally have high infiltration capacities. These soils are generally most suitable for stormwater infiltration applications and constitute the following percentage of area in the city:

- Group A Soils: 27 percent
- Group B Soils: 33 percent

Hydrologic Soil Groups C and D are sandy or silty soils characterized by low permeability and relatively high runoff potential, making them less suitable for stormwater infiltration applications. A portion of Lacey is also occupied by wetlands and waterbodies. These soil groups constitute the following percentage of area in the city:

- Group C Soils: 26 percent
- Group D Soils: 7 percent
- Wetlands and Waterbodies: 6 percent

Figure 2-3. Hydrologic Soil Groups in the City of Lacey.



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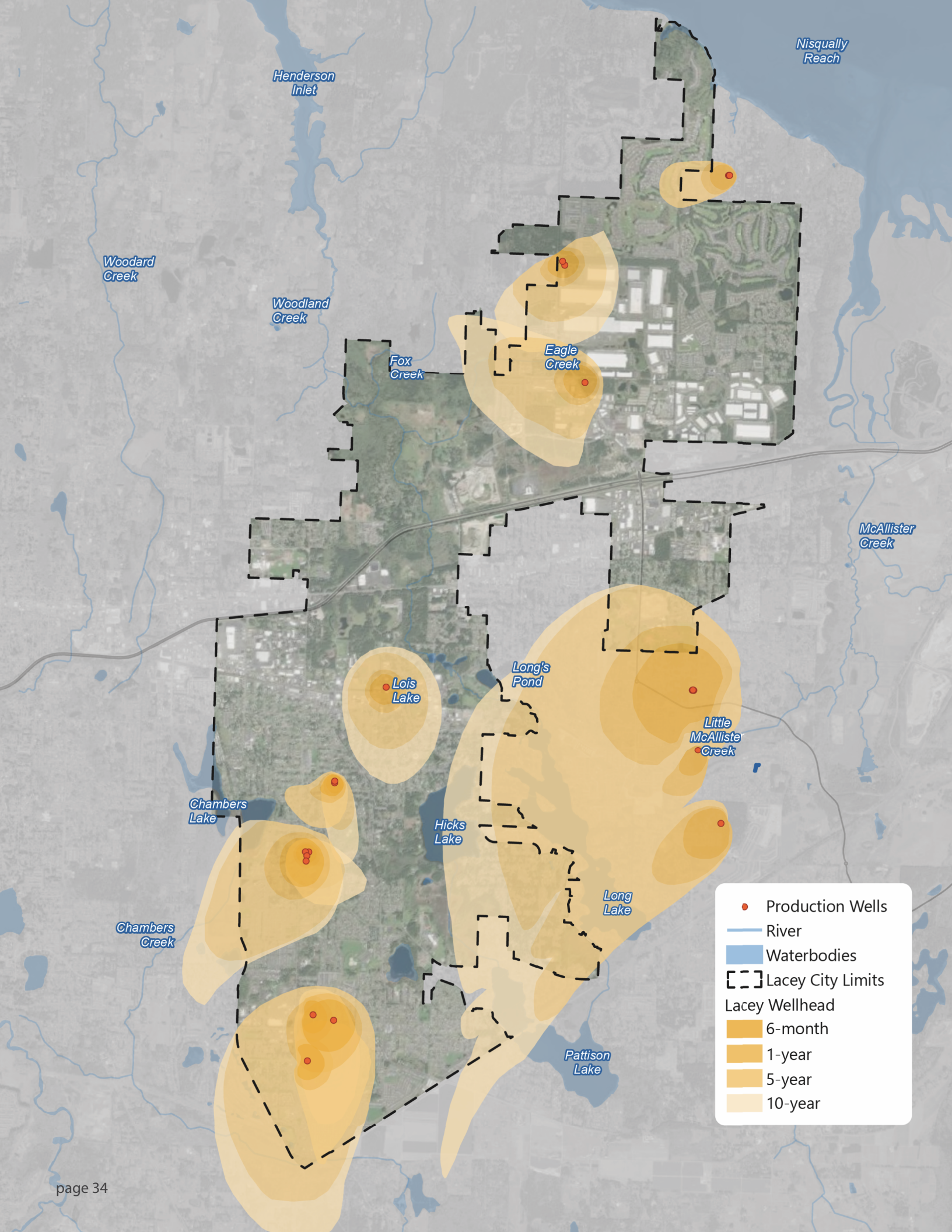
Nisqually Reach
Henderson Inlet
Woodard Creek
Woodland Creek
Fox Creek
Eagle Creek
McAllister Creek
Lois Lake
Long's Pond
Little McAlliste Creek
Chambers Lake
Hicks Lake
Long Lake
Chambers Creek
Pattison Lake
Production Wells
River
Waterbodies
Lacey City Limits
Lacey Wellhead
6-month
1-year
5-year
10-year

Sensitive groundwater areas in the city include Wellhead Protection Areas (WHPAs) and Critical Aquifer Recharge Areas (CARAs). WHPAs consist of a sanitary control area and time-based capture zones that are used to identify the area of influence around each drinking water well, and where land use management can help to reduce the risk of contamination (Lacey 2020). CARAs are defined in the Washington Administrative Code (WAC) as "areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge" (WAC 365-190-030).

Because WHPAs identify areas where land use is carefully regulated to avoid contamination of drinking water, groundwater in these areas should be protected. Heightened land use and infiltration regulations in these areas are governed through Lacey's wellhead protection program in the Utilities Element of the City of Lacey Water Comprehensive Plan (Lacey 2025) and SDM to prevent contamination of drinking water. Future development in wellhead protection areas through land use and activity regulation is defined and enforced through LMC 14.27 and LMC 14.36. These protected areas constitute the following percentage of the city:

- Wellhead Protection Areas (WHPAs): 40 percent
- Critical Aquifer Recharge Areas (CARAs; Inclusive of WHPAs): 100 percent

Figure 2-4. Critical Aquifer Recharge Areas (CARA) and Wellhead Protection Areas (WHPA) Sourced in the City of Lacey.

2.3 Waterbodies and Stormwater Infrastructure

Waterbodies

Stormwater runoff within the city limits and the UGA drains to three watersheds along the Puget Sound: Henderson Inlet, the Deschutes River to Budd Inlet, and McAllister Creek to the Nisqually Reach. The Department of Ecology assesses the quality of all waterbodies in the state to determine whether they are impaired by pollutants and require a water improvement project, or Total Maximum Daily Load (TMDL). Summaries of Henderson Inlet, Nisqually Reach, and Budd Inlet watersheds are included below.

Additional information related to watersheds and waterbodies in the city and the specific activities required by the TMDLs can be found in Appendix B.

Henderson Inlet

Tributaries to Henderson Inlet include Woodard Creek and Woodland Creek, which flows out of a chain of connected lakes: Hicks Lake, Pattison Lake, Long Lake, and Lake Lois. Other tributaries to Woodland Creek within Lacey city limits include College Creek, Palm Creek, and Eagle Creek. Other tributaries to Woodland Creek within Lacey's UGA include Fox Creek and Jorgenson Creek.

Henderson Inlet and its tributaries are subject to a TMDL for impairment due to fecal coliform bacteria and dissolved oxygen. Other concerns include high temperature and high peak flows in Woodland Creek and phosphorus and invasive vegetation in the four lakes.

Nisqually Reach

Runoff from Lacey flows east to the Nisqually Reach from Little McAllister Creek, which is a tributary of McAllister Creek. The Nisqually Reach and its tributaries are subject to a TMDL to address fecal coliform bacterial and dissolved oxygen impairments, though Little McAllister Creek and the City of Lacey are not specifically identified in this plan.

Budd Inlet

Runoff from Lacey flows southwest from Chambers Lake to the Deschutes River, which then travels northwest to Budd Inlet. Budd Inlet and its tributaries are subject to two TMDLs to address temperature and dissolved oxygen impairments. In 2015, Lacey constructed the Chambers Lake Stormwater Treatment Facility to provide stormwater treatment for 187 acres that drain into Little Chambers Lake, and ultimately to the Deschutes River and Budd Inlet. Lacey is continuing to work on other projects to address impairments to Budd Inlet.

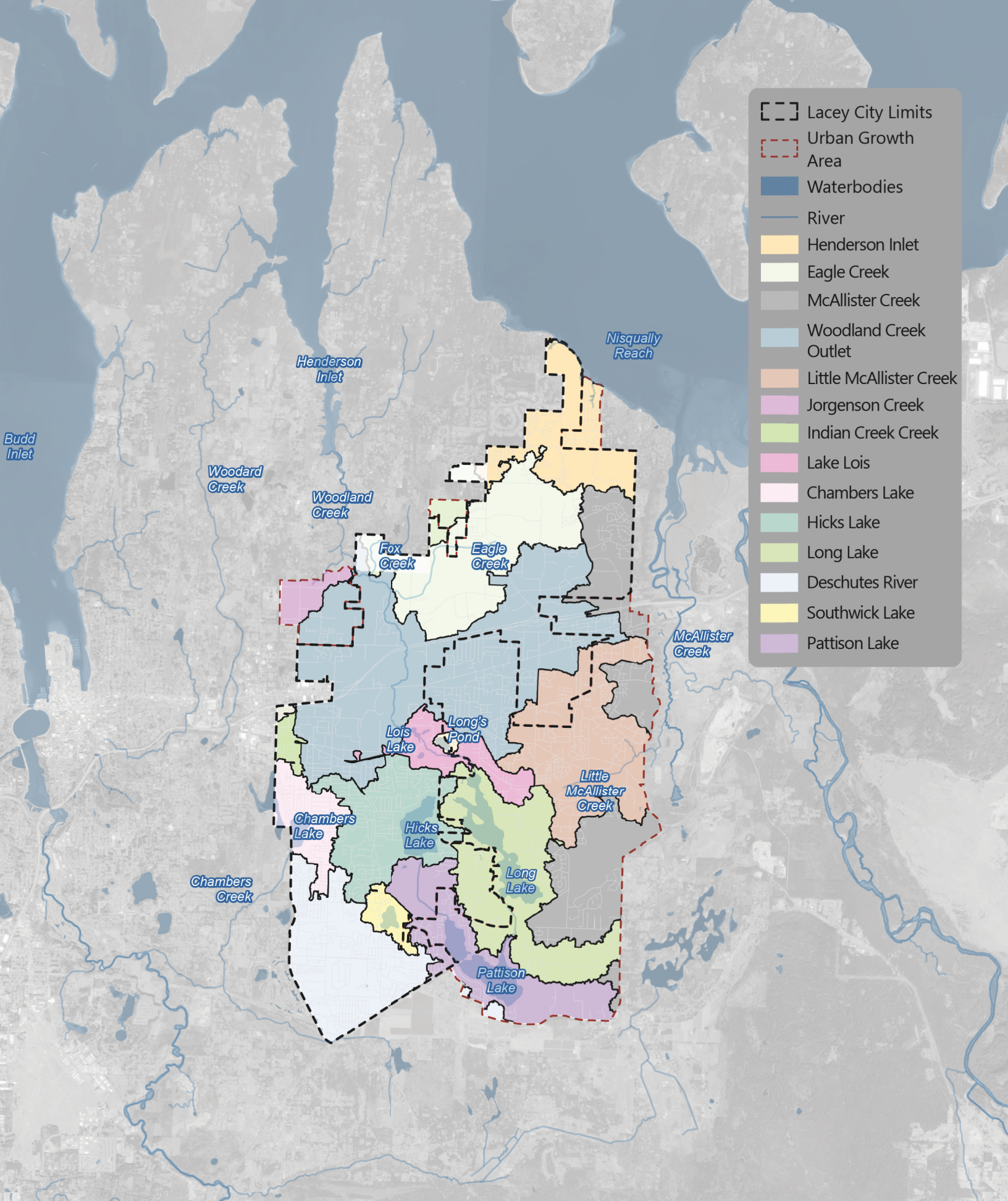

Figure 2-5. Drainage Basins within the City of Lacey.

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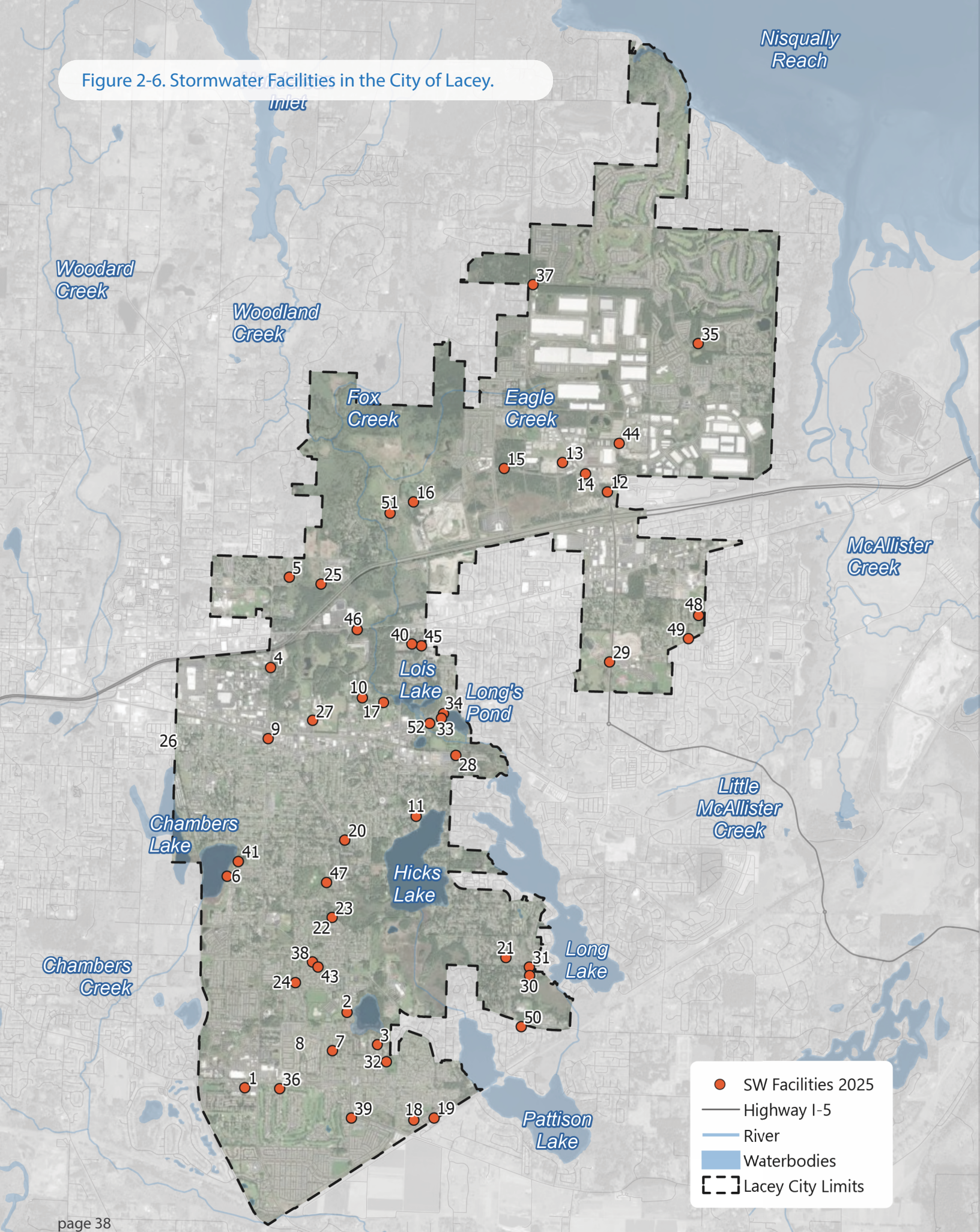
Figure 2-6. Stormwater Facilities in the City of Lacey.



Stormwater Infrastructure

Lacey's stormwater utility manages a large and complex storm drainage system in the public right-of-way (Table 2-1). This storm drainage system is important to protecting public and private property, ensuring public safety, and providing flow control and water quality treatment to stormwater runoff before it discharges to receiving waters. A table of Lacey's stormwater facilities including information related to drainage area, function, and discharge waterbody is included in Appendix C.

Table 2-1. Summary of Lacey's Stormwater System.

Item	Quantitiy	Units
Catch basins and storm drains[a]	7,140	each
City stormwater conveyance (including pipes, ditches, and culverts)[a]	150	miles
Outfalls (discharging to surface water) [a]	65	each
Drywells (discharge via infiltration to groundwater) [a]	159	each
Infiltration trenches (discharge via infiltration to groundwater)[a]	53	each
Water quality treatment facilities – Constructed wetlands[a,b]	7	each
Water quality treatment facilities – Wet ponds[a,b]	28	each
Water quality treatment facilities – Other[a,b]	106	each
Retention/Detention ponds and infiltration basins[a,c,d]	47	each
Regional facilities primarily discharging to groundwater[a,e]	38	each
Regional facilities primarily discharging to surface water[a,e]	14	each
Municipal streets, centerline miles[a]	184.9	CL miles
Municipal streets, lane miles[a]	419.7	lane miles
Impervious surface area in the city[f]	36	percent

[a] Based on input from City Lacey staff and review of Geographic Information Systems (GIS) data and files provided by the Lacey.

[b] Water quality treatment facilities include wet ponds and constructed wetlands that are designed to remove pollutants from stormwater runoff. Other types of water quality treatment facilities include bioswales, filter strips, filter vaults, and sedimentation vaults.

[c] Detention facilities include detention ponds that temporarily store stormwater runoff, reducing peak flows but eventually discharging the same volume. Detention facilities provide little or no infiltration of stored stormwater.

[d] Retention facilities include retention ponds, swales and infiltration basins that are designed to hold stormwater runoff and release it by evaporation, plant transpiration, and/or infiltration into the ground, reducing peak flows and the volume discharged.

[e] Regional facilities are large stormwater facilities (typically detention or retention ponds) that are designed to detain stormwater runoff from a number of new developments or areas within a drainage basin.

[f] Impervious area calculated in 2025 using 2022 aerial imagery.

2.4 Climate Change

Climate change poses both immediate and long-term challenges for management of Lacey's stormwater system. Projected increases in annual and extreme temperatures are likely to exacerbate water quality issues such as low dissolved oxygen and frequent algal blooms in lakes and downstream receiving waters. In addition, higher temperatures can have impacts on vegetation communities and require additional water usage. Lacey's reliance on groundwater for its water supply underscores the growing importance of stormwater infiltration and groundwater recharge as climate impacts intensify. Additionally, altered precipitation patterns are anticipated to increase flood risks and stress stormwater facilities that were designed for historic conditions. Sea level rise may also affect water quality through saltwater intrusion in drinking water wells. More details about the relationship between climate change and stormwater management, including projected changes in temperature, precipitation, and sea level rise, can be found in Appendix D.

2.5 Stormwater Utility Fund

To meet the growing needs for stormwater management, Lacey created its Stormwater Utility Fund on January 24, 1985 under Ordinance No. 712. This new fund was established as an enterprise fund, similar to Lacey's sewer and water enterprise funds, with dedicated revenues and expenditures which made the stormwater utility self-supporting. The following year, Ordinance No. 794 established interim stormwater utility fees, which became effective on January 1, 1987. These were flat fees assessed to property owners on a per-parcel basis, which enabled Lacey to collect storm and surface water utility charges to provide services to residents, including operation of the stormwater utility, drainage basin analysis, and construction of facilities.

On April 26, 1990, LMC Chapter 13.70 was amended under Ordinance No. 886 to establish a more permanent rate structure, with a flat rate for single-family and two-family residential parcels and a seven-step sliding rate for commercial parcels. The new rate structure became effective on July 1, 1990, and is still in use today.

Funds received by the stormwater utility are used in the management and control of stormwater, operation and maintenance of the drainage system, and construction of stormwater facilities. Over the years, stormwater utility fees collected by Lacey have been used for an increasing number of purposes as stormwater issues and regulatory requirements have grown.

2.6 Applicable Regulations

Lacey's SWMP supports efforts to comply with the following local, state, and federal regulations and other requirements:

Underground Injection Control (UIC) Well

Underground Injection Control (UIC) Rule

The UIC program is a federal program intended to ensure that underground sources of drinking water are protected from surface discharges to the ground. In Washington, the UIC program is administered by Ecology through Chapter 173-218 of the Washington Administrative Code (WAC). The Guidance for UIC Wells that Manage Stormwater (Ecology 2006) lays out the requirements for UIC wells, and Ecology has included additional guidance in the latest update of the Stormwater Management Manual for Western Washington, released in 2024.

Maintenance Crews at College Regional Stormwater Facility

Ecology Total Maximum Daily Load (TMDL) Implementation Plans

Waterbodies that have been identified as impaired on Ecology's Section 303(d) list (Ecology 2026) due to poor water quality are required to have a TMDL implementation plan. The TMDL implementation plan includes actions to prevent, reduce, and/or clean up excess pollution. Refer to Appendix B for more information about Lacey's waterbodies.

Puget Sound and Mount Rainier

Action Agenda for the Puget Sound

The Puget Sound Partnership (PSP) is the regional organization that the Washington State Legislature established to coordinate and lead the effort to recover the Puget Sound (PSP 2022). The current action agenda implementation plan does not list any specific actions for Lacey at this time.

Southern Resident Killer Whales (Orcas)

Commercial Development within Lacey

Example of Low Impact Development (LID)

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) prohibits the take of all listed species, including a take that could result from Lacey's stormwater facility operations or private development stormwater management activities that are permitted by Lacey.

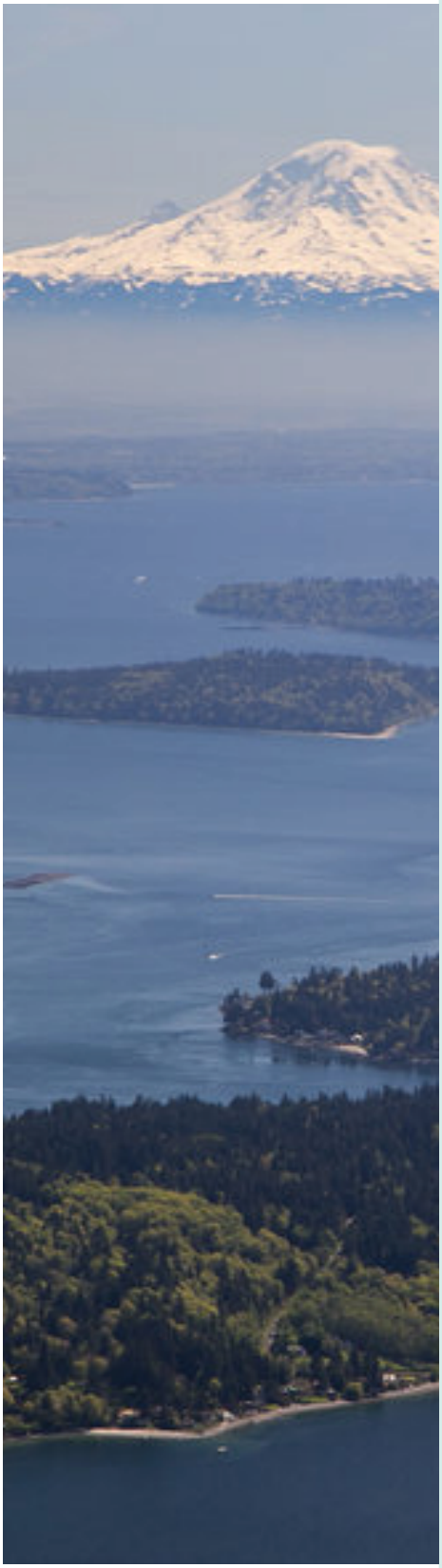
Washington State Growth Management Act

The Washington State Growth Management Act (GMA) requires Lacey to inventory and protect environmentally critical areas (such as steep slopes, wetlands, and streams) (Chapter 36.70A of the Revised Code of Washington [RCW]). The GMA also requires Lacey to develop comprehensive plans in order to ensure environmentally responsible and economically sustainable development, including planning for stormwater-related capital facilities.

Lacey Municipal Code

Several sections of the Lacey Municipal Code (LMC) govern aspects of stormwater management on new development and redevelopment project sites, as well as inspection and maintenance requirements for private stormwater facilities. These sections include, but are not limited to:

- LMC 14.27 – Stormwater Management
- LMC 14.29 – Illicit Discharges
- LMC 14.36 – Wellhead Protection and Critical Aquifer Recharge Areas



Puget Sound and Mount Rainier

NPDES Phase II Municipal Stormwater Permit

The NPDES Phase II Municipal Stormwater Permit (Phase II Permit; Ecology 2024) has broad requirements associated with stormwater runoff and requires Lacey to develop several distinct SWMP components. The first Phase II Permit was issued by Ecology in 2007, reissued in 2012 and 2019, and again in 2024. The requirements for Lacey's stormwater program SWMP have become more stringent with each new issuance. The Phase II Permit requires that the Lacey's SWMP meet requirements in 12 primary areas:

1. Stormwater planning
2. Public education and outreach
3. Public involvement and participation
4. Municipal separate storm sewer system (MS4) mapping and documentation
5. Illicit discharge detection and elimination (IDDE)
6. Controlling runoff from new development, redevelopment, and construction sites
7. Stormwater management for existing development (SMED)
8. Source control program for existing development
9. Operations and maintenance
10. TMDL requirements
11. Monitoring and assessment
12. Reporting requirements

Refer to Ecology's Western Washington Phase II Municipal Stormwater Permit webpage for a complete list of requirements.

Southern Resident Killer Whales (Orcas)

NPDES Phase II Municipal Stormwater Permit Major New Requirements

The latest Phase II Permit requires Lacey to take on several new activities between 2024 and 2029 in addition to the many ongoing requirements that carry over from the 2020-2024 Phase II Permit. The new activities listed below will have the greatest demand on staff time.

Stormwater Planning

Complete and submit a Stormwater Management Action Plan (SMAP) for at least one new high priority catchment area or additional actions for an existing SMAP by March 2027.

Adopt and implement tree canopy goals and policies to support stormwater management by December 2028.

MS4 Mapping and Documentation

Develop and implement methodology to identify tree canopy for stormwater management purposes by December2026.

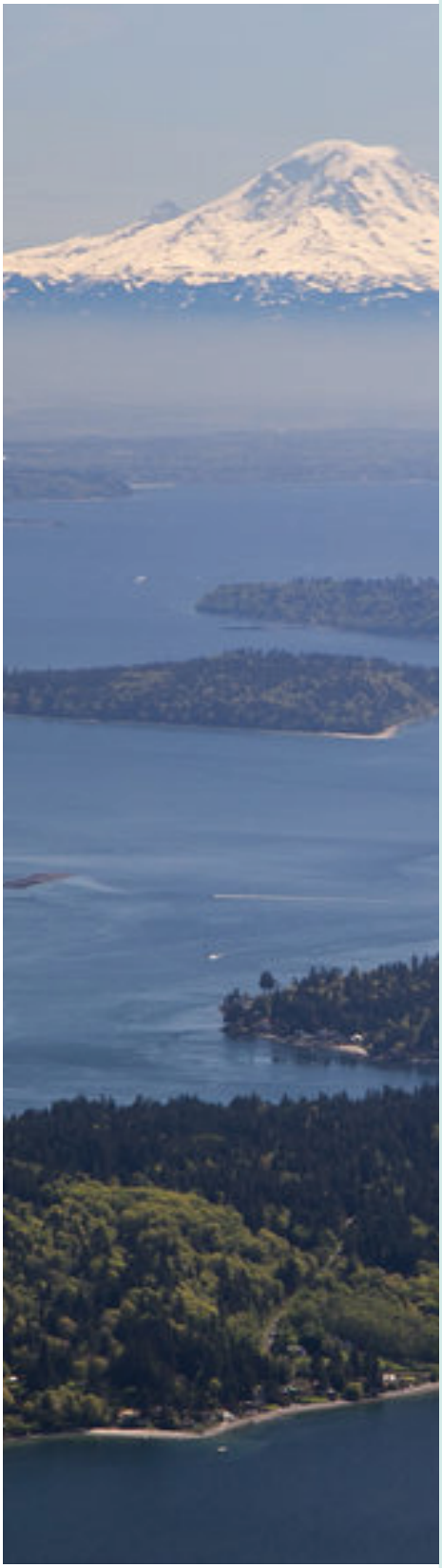
Map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger that have stormwater treatment and flow control best management practices (BMPs)/facilities. Estimate areas managed by stormwater treatment and flow control BMPs/facilities by March 2028.

Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy by December 2028.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

Update local regulations and permitting processes to meet criteria specified in the Phase II Permit by June 2027.

Update Lacey's 2022 Stormwater Design Manual (SDM) by June 2027.



Puget Sound and Mount Rainier

NPDES Phase II Municipal Stormwater Permit Major New Requirements Continued. . .

SMED

Fully fund, start construction, or completely implement project(s) that meet the 9.3 equivalent acres in Appendix 12 of the Phase II Permit.

Operations and Maintenance

Develop and implement a municipal street sweeping program by July 2027.

Update practices, policies, and procedures to address polychlorinated biphenyls (PCBs) in City-owned buildings.

TMDL

Begin using existing data to conduct spatial analysis of nutrient loading from the MS4 to Budd Inlet by December 2027.

Develop and implement priority BMPs to minimize the transport of nutrients via the MS4 to Budd Inlet by August 2028.

Designate areas discharging via the MS4 to Budd Inlet as high priority areas for IDDE. Complete IDDE screening for nutrient sources in 100% of these areas by July 2029.

SOUTH SOUND RESTAURANTS PROTECTING PUGET SOUND

Puget Sound Starts Here

In your restaurant, follow the simple tasks below to ensure kitchen waste and dirty wash water does not enter storm drains. ***Storm drains are meant only for stormwater runoff and flow directly into our streams and Puget Sound.***

KITCHEN MATS

DO

- Wash kitchen mats indoors near a floor drain or in a sink.
- Dispose dirty wash water down a toilet or sink.

DO NOT

- Wash kitchen mats outside.
- Dump dirty wash water into the streets, alleys, or storm drains.

GREASE DISPOSAL

DO

- Collect all grease in containers and keep covered with tightly fitting lids.
- Contact a grease or tallow company to collect and haul grease away.

DO NOT

- Pour grease down storm drains, into street gutters, or into trash bins.
- Dump grease into sinks where they will clog the drain pipes!

TRASH BINS

DO

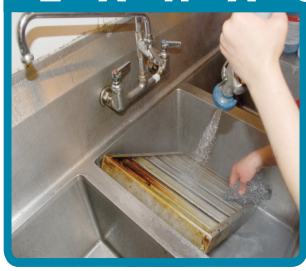
- Clean dumpsters and parking areas by sweeping, and dispose of swept-up debris into a trash bin.
- For spills, use kitty litter or a spill product that encapsulates or aborbs oil, then bag, and discard into a trash bin.

DO NOT

- Hose down trash bins,grease storage areas or parking lots.
- Allow dirty water or any other debris into the storm drain.

Caution! Large spill volumes will need to be disposed of at a hazard waste site such as HazoHouse.

EXHAUST FILTERS



DO

- Wash exhaust filters in a sink or container and dump the dirty water down a drain or toilet.

SUGGESTION: Contract with a hood cleaning service.

DO NOT

- Power wash exhaust filters in an alley or parking lot.
- Pour or allow dirty wash water into the storm drain.

VIOLATORS MAY BE SUBJECT TO FINES.

This poster was a collaboration between the Cities of Olympia, Lacey, Tumwater and Thurston County. For more information or to request a new poster, please contact your local utility, or visit: www.olympiawa.gov; www.ci.lacey.wa.us; www.ci.tumwater.wa.us; or www.co.thurston.wa.us.

Source Control Best Practice Poster

3.0 STORMWATER MANAGEMENT PROGRAM EVALUATION AND RECOMMENDATIONS

Chapter 3 of this plan summarizes the key SWMP required and recommended future activities to meet 2024–2029 Phase II Permit requirements and meet Lacey's long-term goals for the SWMP. The activities were developed based on a gap analysis (comparison of Lacey's present SWMP to the 2024–2029 Phase II Permit requirements) and a needs assessment conducted in 2025 and 2026 to evaluate specific components of Lacey's SWMP with respect to 2024–2029 Phase II Permit requirements. In addition to meeting permit requirements and meeting Lacey's long-term goals for the SWMP, Section 3.3 identifies climate change adaptation strategies and ways that the existing stormwater program builds climate change resilience.

3.1 Level of Service

Lacey has identified two levels of service for this plan:

- Required: the required level of service is compliant with current and future permit requirements, maintains existing programs, and implements critical capital projects.
- Recommended: the recommended level of service expands programs to make more progress towards long-term goals and implements critical, high, and moderate priority capital projects.

For each level of service, Lacey identified future activities. Some of these future activities need additional staffing and/or outside support while others can be completed without additional resources. The following sections and chapters focus on the activities that need additional staffing and/or outside support.

Stream Team Sampling

3.2 Required Future Activities

This section includes required future activities that need additional staffing and/or outside support for 2027. Each required future activity is organized by program element. However, not all program elements are covered by these required future activities, as some of these program elements are covered by the following activities and programs:

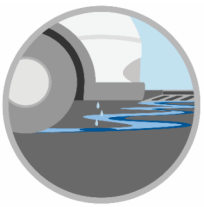
- Required future activities that do not need additional staffing and/or outside support
- Required future activities that occur later in the planning horizon (i.e., 2028 through 2035)
- Recommended future activities (refer to Section 3.3)
- Capital Improvement Program and Maintenance Programs (refer to Section 4.0)

Groundwater Protection and Recharge

- Conduct annual maintenance inspections of municipal UIC wells.
- Integrate areas served by municipal UIC wells into the IDDE Program as part of routine response activities.
- Create a map of all municipal UIC wells to be used during IDDE spill response activities.

Public Participation (Education, Outreach, and Involvement)

- Develop an overburdened community pet waste program.



Pollutant Source Control

- Update practices, policies, and procedures to include Source Control BMPs for minimizing PCBs entering the MS4 from City-owned buildings exterior cleaning and maintenance and to prevent PCBs from entering the MS4 in preparation for and during demolition and renovation of City-owned buildings.

Development Practices

- Continue to implement stormwater plan review.
- Meet the SMED requirements found in Section S5.C.7 and Appendix 12 of the 2024-2029 Phase II Permit.

Stormwater Planning, Administration, and Funding

- Add actions to the Woodland Creek SMAP.
- Continue to make annual payment of $14,545 (by August 15th each year) to the collective fund for Regional Status and Trends Monitoring per Phase II Permit Section S8.A.
- Continue to make annual payment of $21,527 (by August 15th each year) to the collective fund for SWMP Effectiveness and Source ID Studies per Phase II Permit Section S8.B.

A detailed list of required future activities for the 9-year planning horizon (2027 through 2035), including associated staffing, outside support needs, and a proposed implementation schedule, is provided in Appendix F.

3.3 Recommended Future Activities

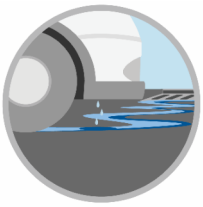
This section includes recommended future activities that need additional staffing and/or outside support for 2027. Each recommended future activity is organized by program element. However, similar to the required future activities, not all program elements are covered by the recommended future activities, as some of these program elements are covered by the following activities and programs:

- Required future activities (refer to Section 3.2)
- Recommended future activities that do not need additional staffing and/or outside support
- Recommended future activities that occur later in the planning horizon (i.e., 2028 through 2035)
- Capital Improvement Program and Maintenance Programs (refer to Section 4.0)

Earth Day Work Party in 2024

Public Participation (Education, Outreach, and Involvement)

- Continue to coordinate with Parks on stewardship events.
- Host a yearly open house to discuss the City's SWMP Plan, SMAP, and SMED program and projects.



Pollutant Source Control

- Continue to train staff on SwiftComply software.

Infrastructure Operations and Maintenance:

- Apply for a Department of Natural Resources (DNR) grant to perform an additional tree canopy assessment.
- Review and update inspection, operation and maintenance processes and procedures for City owned or operated stormwater catch basins, flow control, and treatment facilities.
- Continue to coordinate with North Thurston Public Schools on inspections of schools within the city.
- Continue to coordinate with Lacey Fire District 3 on inspections of fire stations within the city.
- Continue to train staff on Naviline software.

A detailed list of recommended future activities for the 9-year planning horizon (2027 through 2035), including associated staffing, outside support needs, and a proposed implementation schedule, is provided in Appendix F.

3.4 Building Climate Change Resilience Through Stormwater Management

There are numerous actions that Lacey is taking to increase the resilience of the stormwater system to changes in temperature and precipitation patterns. As part of the City of Lacey Comprehensive Plan (Lacey 2025) update process, Lacey developed a Resilience Sub-Element Policy Framework which outlines 12 goals for reducing the risks facing the city as the climate changes. Continuing to support and implement these policies, as well as the program elements and long-term goals in Chapter 1, will support Lacey's stormwater systems. Within Resilience Sub-Element, several goals overlap with policy and management related to Lacey's stormwater systems:

Goal R-2. Recruit, train, and support teams of community resilience volunteers.

- R-2A: Recruit and support volunteers to monitor and enhance ecosystem health, including shoreline areas, riparian zones, and forests.

Goal R-3. Ensure that Lacey has adequate funding and staffing to implement climate resilience goals and policies.

- R-3A: Leverage mitigation grants to finance resilience projects.
- R-3B: Prioritize climate resilience funding and staffing in City budgets.
- R-3C: Advocate for State and Federal policies and funding that support resilience to climate change.

Goal R-4: Use the most up-to-date data and analysis to regularly monitor changes in climate hazard impacts and related forecasts and to update resilience plans and strategies accordingly.

- R-4A: Partner with state and federal agencies, colleges, universities, and non-governmental organizations to better understand and prepare for climate hazards.
- R-4B: Update climate impacts risk assessments and policies in the hazard mitigation plan, with increasing focus on extreme heat events and wildfire smoke.
- R-4C: Prepare plans that guide post-disaster recovery, including changes in land use, modifications

to infrastructure and facilities, and resilient development standards.

Goal R-5. Prioritize resilience when planning future land uses.

- R-5C: Prioritize denser infill development over greenfield development to avoid encroachment on potential hazard areas, critical areas, and other ecologically important lands.

Goal R-6. Expand and preserve ecosystems, natural habitat, and open space to reduce risks from flooding, wildfire, extreme heat, or other hazards.

- R-6B: Restore and protect riparian ecosystems to reduce erosion and flooding during storm events.
- R-6C: Vegetate shorelines. Protect existing native shorelines and support vegetation of shorelines with materials supportive of natural shoreline functions that will help maintain and improve water quality and habitat.
- R-6D: Plan for ecosystem resilience. Create and support natural resource management plans that address existing stressors, consider climate change impacts, increase resilience, incorporate habitat connectivity, and guide adaptive management.

Goal R-7. Expand and maintain the urban tree canopy and forest to maximize resilience to heat, drought, wildfire, and other hazards.

- R-7B: Implement climate-smart forest management, including tree species that are well-adapted to climate changes like drought and new pest threats.

Goal R-8. Update development standards to ensure the resilience of development and redevelopment projects.

- R-8B: Update stormwater management standards as necessary for public infrastructure and private development to minimize flooding, maximize water recharge, and minimize pollution through the use of green infrastructure and low impact development (LID) practices.

Goal R-9. Enhance infrastructure to reduce vulnerabilities to hazards.

- R-9A: Protect City water sources and infrastructure from hazard risks, including impacts of flooding and drought on water supplies.
- R-9B: Enforce regulations that require trimming and vegetation removal to be performed according to professional arboricultural specifications and standards. Educate the community on proper pruning practices (i.e., no tree topping), directional pruning, and phased replacement of incompatible vegetation within the right-of-way.

Additional strategies could help Lacey increase climate resilience of the stormwater system, including:

- Determine hot spot areas at or near flow capacity. Modeling the stormwater management system to determine what areas are at or near flow capacity and thus prone to increased flood risk in the future; particularly in neighborhoods, where redevelopment is expected to occur or where large capital improvement projects are planned could help reduce future flood risk.
- Retrofit stormwater facilities. Retrofitting existing stormwater facilities for both better infiltration and treatment performance, or constructing new stormwater infrastructure such as constructed wetlands, or LID facilities that more effectively treat water quality in areas that have surface runoff (i.e., areas that do not infiltrate 100 percent of stormwater) could help mitigate future stressors on water quality and groundwater recharge.

These resiliency building activities are organized by program elements and described more detail in Table 2-2. Many of these activities are part of Lacey's existing stormwater program. Activities that are not part of Lacey's stormwater program are noted.

Table 2-2. Stormwater Management Activities Addressing Climate Change Impacts.

Resiliency-Building Activity	Climate Change Stressor Addressed
Program Element: Surface Water Quality Improvement	
• Constructing stormwater quality retrofit projects and protecting and restoring riparian areas • Enhancing water infrastructure to reduce vulnerabilities to climate hazard	• Drought • Flooding • Heat island • Water quality
Program Element: Public Participation	
• Educational campaigns to encourage the public to decrease pollutant generation, such as by decreasing fertilizer use, particularly in lake watersheds[a] • Public involvement in the stream team and other stewardship programs • Volunteer support to monitor and enhance ecosystem health	• Water quality • Flooding
Program Element: Infrastructure Operations and Maintenance	
• Operations and maintenance activities including street sweeping and spot checks of inlets and other critical points in the stormwater conveyance system before storms	• Flooding • Erosion • Water quality
Program Element: Development Practices	
• Continuing to require flow control on redevelopment projects and prioritizing infiltrating stormwater facilities; LID as the preferred approach • Prioritizing resilience when planning future land uses[a] • Updating development standards to ensure resilience of development and redevelopment projects	• Flooding • Heat island effects • Water quality
Program Element: Stormwater Planning, Administration, and Funding	
• Ensuring Lacey has adequate funding and staffing to implement climate resilience goals and policies • Using up-to-date data and analysis to monitor changes in climate hazards and update resilience plans and strategies • Purchasing land for conservation purposes to offset loss of streamside vegetation and reduce flooding impacts by acquiring frequently-flooded properties[a] • Expanding and preserving ecosystems, natural habitat, and open space	• Drought and fire • Erosion • Flooding • Water quality
• Reducing the amount of nutrients in stormwater through regulations aimed at decreasing fertilizer use, particularly in lake watersheds • Revisiting flood reduction policies, design standards for new development, and priorities for retrofit projects	• Water quality • Flooding
• Expanding and maintaining urban tree canopy and forest[a] • Developing a forest management plan with fire management strategies for vegetation in Lacey by coordinating with the Fire Department[a]	• Fire • Water quality

[a] Not part of Lacey's stormwater management program.

4.0 CAPITAL IMPROVEMENT PROGRAM AND MAINTENANCE PROGRAMS

This chapter summarizes Lacey's stormwater Capital Improvement Program (CIP) and Maintenance Programs. The purpose of the stormwater CIP and Maintenance Programs is to define capital and maintenance projects that make progress towards Lacey's long-term goals related to the following program elements of the SWMP:

Construction Site

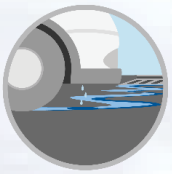
Flood Reduction

Surface Water Quality Improvement

Groundwater Protection and Recharge

Habitat Improvement

Public Participation (Education, Outreach, and Involvement)



Pollutant Source Control

Infrastructure Operations and Maintenance

Development Practices

Stormwater Planning, Administration, and Funding

(Capitol Improvement Program and Maintenance Programs) page 59

4.1 Capital Improvement Program

Lacey maintains and regularly updates a list of needed stormwater capital projects. The following section describes the process used to identify stormwater problems and develop and prioritize solutions. A map of stormwater CIP projects is included.

4.1.1 Problem Identification and Solution Development

The stormwater capital projects from the 2020 Stormwater Comprehensive Plan (Lacey 2020) were updated using input from Lacey staff on completed projects and new problems. Problems were evaluated using desktop methods and field evaluation to assess site-specific opportunities and constraints. New project concepts were developed using desktop methods and an estimated cost was defined for each project. Each project was also assigned a unique identification number (#). The identification number was assigned based on the order in which the problem was identified and does not relate to project priority. A summary of the stormwater capital projects is included in Table 4-1 and shown in Figure 4-1.

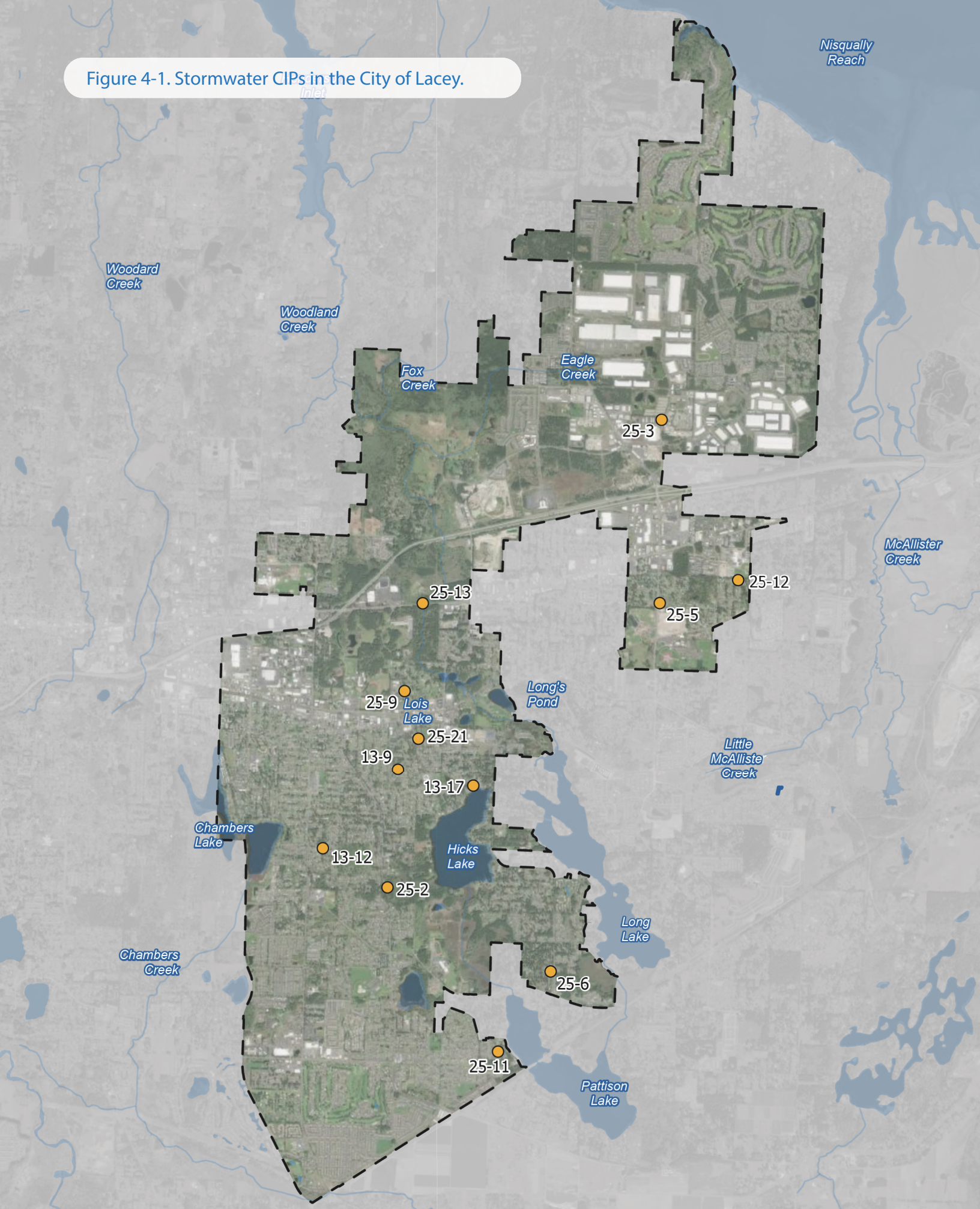
However, there are some known issues that are not being addressed by the stormwater capital projects due to lack of public support, political barriers, or coordination with other projects with uncertain timing. These problems are expected to persist and potentially worsen during the planning period. These issues are briefly summarized below:

- Nuisance flooding caused by ditches that have been filled in by adjacent property owners.
- Corrosion of the Hicks-Pattison culvert just outside the city limits
- Future collaboration with Washington State Department of Transportation (WSDOT) to upsize the College Regional Storm Facility outfall pipe under I-5
- Infiltration and flooding issues near Homann Park and Sierra Court SE
- Conveyance capacity issues on Midway Drive NE
- Conveyance access issues on 5th Court SE & 5th Way
- Lack of drainage infrastructure along Alder Street, Gemini Street, and White Fir Drive NE

Table 4-1. Stormwater Capital Projects.			
#	Project Name	Cost Estimate (2026)	Goals Addressed (By Priority)
13-9	Clearbrook Drainage System	$6,100,000	Flood Reduction, Groundwater Protection and Recharge, Surface Water Quality Improvement
13-12	Belair-Impala Stormwater Installation	$2,800,000	Flood Reduction
13-17	Shady Lane Treatment Facility Improvements	$1,600,000	Infrastructure Operations and Maintenance, Surface Water Quality Improvement
25-2	Ruddell & 32nd Facility Retrofit	$12,000,000	Surface Water Quality Improvement, Infrastructure Operations and Maintenance
25-3	28th Court NE Pond Rehabilitation	$1,200,000	Surface Water Quality Improvement
25-5	Hawks Ridge Neighborhood Drywell Repair	$4,200,000	Flood Reduction, Surface Water Quality Improvement, Groundwater Protection and Recharge
25-6	Wedgewood Manor – Clearwater Court Flood Reduction	$360,000	Flood Reduction, Surface Water Quality Improvement, Groundwater Protection and Recharge
25-9	Lacey Street Stormwater Improvements	$4,500,000	Flood Reduction, Surface Water Quality Improvement
25-11	Pattison Lake Drive SE Conveyance Improvements	$160,000	Flood Reduction
25-12	Stormwater Lift Station 01 Improvements (SW LS-01)	$2,300,000	Infrastructure Operations and Maintenance
25-13	Woodland Creek at Martin Way Stormwater Improvements Study	$280,000	Surface Water Quality Improvement
25-21	Glen Mary Drive Stormwater Improvements	$320,000	Flood Reduction, Surface Water Quality Improvement
25-X1	Stormwater Design Manual Update	$200,000	Comprehensive Planning, Administration, and Funding; Development Practices
25-X2	Stormwater Strategic Plan Update	$350,000	Comprehensive Planning, Administration, and Funding

Refer to Appendix E for more detailed information on stormwater capital project design development.

Figure 4-1. Stormwater CIPs in the City of Lacey.



13-9 Clearbrook Drainage System

13-12 Belair-Impala Stormwater Installation

13-17 Shady Lane Treatment Facility Improvements

25-2 Ruddell & 32nd Facility Retrofit

25-3 28th Court NE Pond Rehabilitation

25-5 Hawks Ridge Neighborhood Drywell Repair

25-6 Wedgewood Manor – Clearwater Court Flood Reduction

25-9 Lacey Street Stormwater Improvements

25-11 Pattison Lake Drive SE Conveyance Improvements

25-12 Stormwater Lift Station 01 Improvements (SW LS-01)

25-13 Woodland Creek at Martin Way Stormwater Improvements Study

25-21 Glen Mary Drive Stormwater Improvements

4.1.2 Capital Improvement Program Project Prioritization

The stormwater capital projects in Table 4-1 were prioritized using Lacey Public Works Department's Project Request and Rating Form. The Project Request and Rating Form includes two steps:

1. Project Request Form. A project requester fills out the Project Request Form and submits it for supervisor approval.
2. Project Scoring Rubric. A project requester fills out the Project Request Form and submits it for supervisor approval. If the Project Request Form is approved, the supervisor and engineer, with input from the project requester, fill out the Project Scoring Rubric.

The Project Scoring Rubric evaluates Public Works capital projects based on five categories and associated goals:

1. Capacity Impact: Ensure Lacey's utility systems have sufficient/sustainable capacity for existing and future customers.
2. Functional and Reliable Infrastructure: Ensure Lacey has functional, efficient, infrastructure operating as needed, without excessive maintenance.
3. Public Health/Safety/Regulatory: Ensure Lacey systems and infrastructure prioritizes safety and meets regulatory requirements.
4. Operations and Maintenance Capital and Revenue Impacts: Ensure Lacey is being a good steward of public funds.
5. Scheduling: Ensure Lacey is prepared for the future through delivering projects in an efficient and coordinated manner.

The supervisor and engineer each provide a score for each category, which are then combined into a total score. A Public Works manager must then approve the completed form.

The stormwater capital projects were assigned a total score based on the Project Scoring Rubric in February 2026. The total scores were then used to develop a stormwater capital project implementation schedule. This implementation schedule emphasizes early completion of the projects providing the greatest benefit (refer to Chapter 5, Plan Implementation, for the implementation schedule).

4.2 Maintenance Programs

Lacey is required to perform inspections and maintenance of stormwater assets in accordance with the Phase II Permit. Ongoing inspection and maintenance requirements included in the Operations and Maintenance section of the 2024-2029 Phase II Permit are summarized below:

- Inspection and maintenance of Lacey-owned and operated stormwater BMP/facilities and catch basins
- Inspection of privately-owned stormwater BMPs/ facilities
- Inspection of all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City that have a Stormwater Pollution Prevention Plan (SWPPP)

However, the Phase II Permit does not cover all maintenance that is needed for Lacey's stormwater system. Without a more proactive approach, stormwater assets are more likely to deteriorate over time and lead to failure. Asset failure can result in more complicated and expensive repairs for Lacey staff to manage in addition to regular job responsibilities.

To address this gap and maximize the longevity of the stormwater system, Lacey has developed ongoing maintenance programs. These maintenance programs will allow Lacey to perform proactive inspections, preventative maintenance, and early intervention for failing stormwater assets. More information about these maintenance programs is included in Table 4-2 and Appendix F.

Table 4-2. Maintenance Programs.			
#	Maintenance Programs	Cost Estimate (2026)	Goals Addressed (By Priority)
25-MP1	Private Facility Maintenance Program for Major Maintenance Projects[a]	$0[a]	Infrastructure Operations and Maintenance
25-MP2	Catch Basin Grouting Program	$600,000	Infrastructure Operations and Maintenance
25-MP3	Ditch and Culvert Maintenance Program	$500,000	Infrastructure Operations and Maintenance, Flood Reduction
25-MP4	Stormwater Conveyance Condition Assessment and Rehabilitation/Replacement Program	$4,800,000	Infrastructure Operations and Maintenance, Flood Reduction
25-MP5	Pond Maintenance Program[a]	$0[a]	Infrastructure Operations and Maintenance, Surface Water Quality Improvement

[a] This program is currently ongoing and is not anticipated to require additional outside funding support at the time of publication. Additional outside funding will be reevaluated as the program progresses and new information becomes available.

5.0 PLAN IMPLEMENTATION

This chapter presents detailed information on implementing the required and recommended future activities presented in the Stormwater Management Program Evaluation and Recommendations (Chapter 3) and the stormwater capital projects and maintenance programs described in Capital Improvement Program and Maintenance Programs (Chapter 4). The major components of plan implementation include:

- Staffing needs for the required and recommended future activities
- Outside support for the required and recommended future activities
- Completion of capital projects that address existing stormwater issues
- Establishment of maintenance programs that address existing stormwater issues
- Interdepartmental and interagency collaboration
- Utility finances

Project Planning

5.1 Stormwater Management Program

Staffing Needs

Under the current level of staffing, Lacey stormwater staff are able to address stormwater problems that arise on a daily basis and troubleshoot specific issues that arise with development project reviews. However, these staffing levels are not adequate to perform activities that would enable continual improvement of Lacey's stormwater system or enhancement of Lacey's SWMP.

Current staffing levels will also not be adequate to meet the requirements of the 2024–2029 Phase II Permit and defined program elements and long-term goals during future years. The required and recommended future activities summarized in Table 5-1 will need additional staff time. Refer to Appendix F for a detailed estimate of staffing needs.

Catch Basin Inspection

Table 5-1. Required and Recommended Future Activites Needing Additional Staff Time.	
Program Element	Activities
Flood Reduction[a]	• None
Surface Water Quality Improvement	• Budd Inlet Sampling Plan • Coordinate Collaborative Monitoring Activities
Groundwater Protection and Recharge	• Annual Inspections of Municipal UIC Wells • Integrate Municipal UIC Wells into IDDE Program • Map UIC Wells • Provide Comments During Site Review Process
Habitat Improvement	• Tree Canopy Goals
Public Participation (Education, Outreach, and Involvement)	• PCB Educational and Workshop Materials • Behavior Change Strategy • Educational Workshops • Adopt-a-Drain Program • Education and Outreach on SDM • Stewardship Events Collaboration • Riparian Area Restoration • Overburdened Communities Outreach Program • Yearly Open House • City Website Updates
Pollutant Source Control	• Lacey Municipal Code Review • Develop Post-Emergency Clean Up Procedure • Clean Up Procedure Coordination • Illicit Discharge Enforcement Standard Operating Procedure (SOP) • Staff Training - SwiftComply Software
Stormwater Planning, Administration, and Funding	• Woodland Creek SMAP • Future SMAP • LID Planning • Meet SMED Requirements

Table 5-1. Required and Recommended Future Activites Needing Additional Staff Time.	
Program Element	Activities
Infrastructure Operations and Maintenance	• Geographics Information Systems (GIS) Schema • GIS Intern • Ditch Network Mapping • DNR Grant • Mapping SOP • Implement Private Stormwater O&M Program • Public Stormwater Operations and Maintenance • Update SOPs on Minimizing PCBs • Street Sweeping Operations and Maintenance Processes and Procedures Update • North Thurston Public Schools Coordination • Lacey Fire District 3 Coordination • Private Facility Maintenance Program for Major Maintenance Projects • Street Sweeper Rental • Decant Facility Retrofits Evaluation • Spot Checks Checklist • Vactor Truck • Catch Basin Grouting Program • Ditch and Culvert Maintenance Program • Staff Training - NaviLine Software
Development Practices	• Staff Training - SDM Updates • Stormwater Plan Review • Information Management System Revisions • Standardization of Processes and Procedures • Staff Training – Modeling Software

[a] This program element is achieved through the Capital Improvement Program and Maintenance Programs (refer to Section 5.2).

In addition to the staffing requirements discussed in Chapter 3, Lacey will need staff to manage the construction management and project management aspects of the proposed stormwater capital projects. These costs are included in Appendix E.

Staff Positions

Staff positions needed for the required and recommended future activities in the 9-year planning horizon (2027 through 2035) are included in the figure to the right. The **red** bars represent the anticipated additional staffing need for all required and recommended future activities. The **yellow** bars represent the proposed staffing strategy, which includes the full-time equivalent (FTE) staff in 0.25 FTE increments, described in more detail below.

2027

- Hire 0.5 FTE Project Administrator to support stormwater capital projects.
- Hire 1 FTE Civil Engineer II – Public Works to manage stormwater capital projects and support stormwater plan review.
- Hire 0.5 FTE Wet-Season - Seasonal Journey Level Maintenance Technician for UIC Rule inspections and other needs.

2028

- Hire 0.5 FTE Water Resources Specialist for overburdened communities outreach.
- Hire 1 FTE Journey Level Maintenance Technician for stormwater operations & maintenance.
- Hire 1 FTE Senior Maintenance Technician for stormwater operations & maintenance.
- Hire 0.5 FTE Engineering Technician III for the private facility maintenance program for major maintenance projects.

2029

- Hire 0.25 FTE Journey Level Maintenance Technician for the catch basin grouting program.

2030

- Hire 0.25 FTE Senior Maintenance Technician for the ditch and culvert maintenance program.

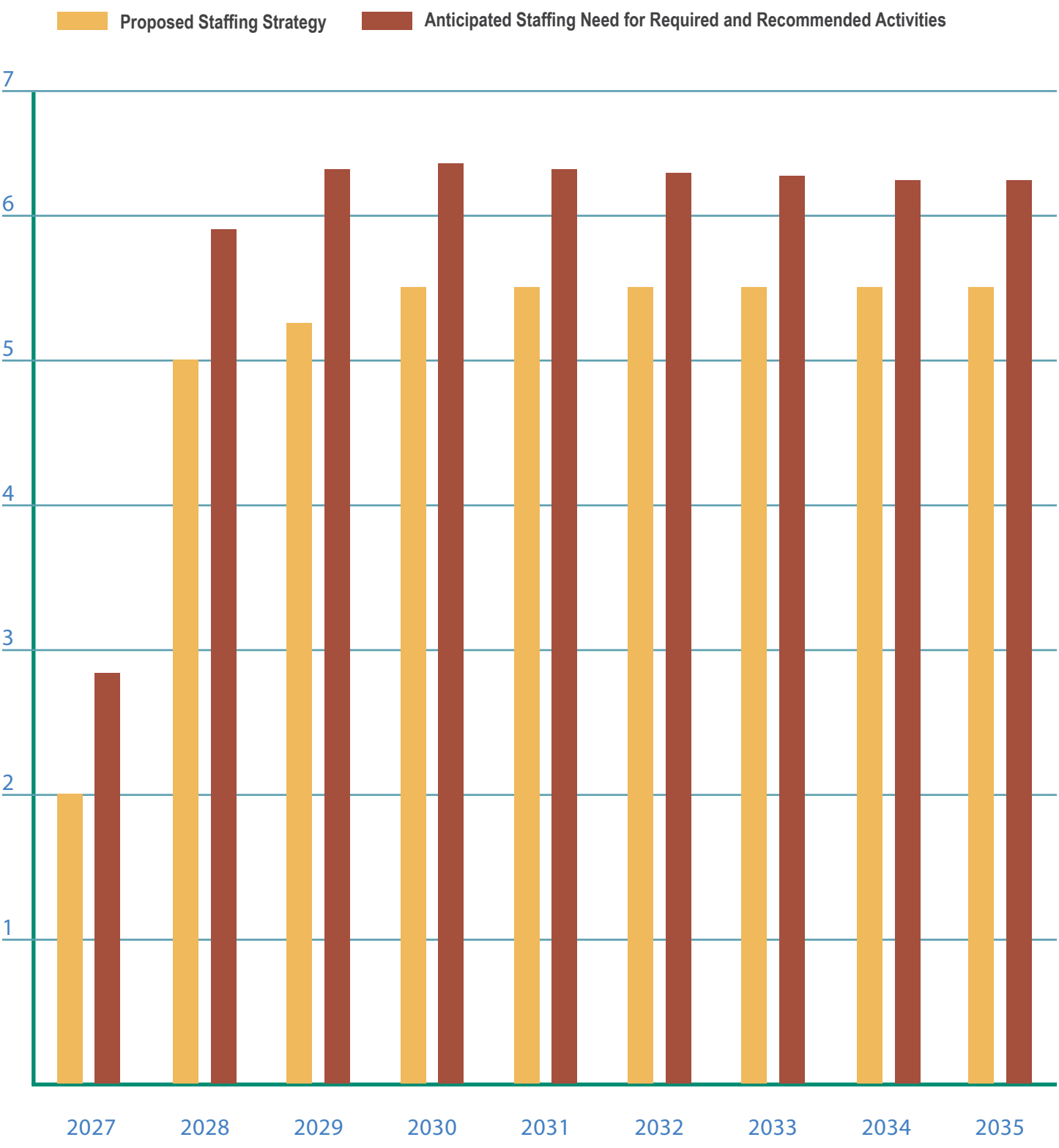
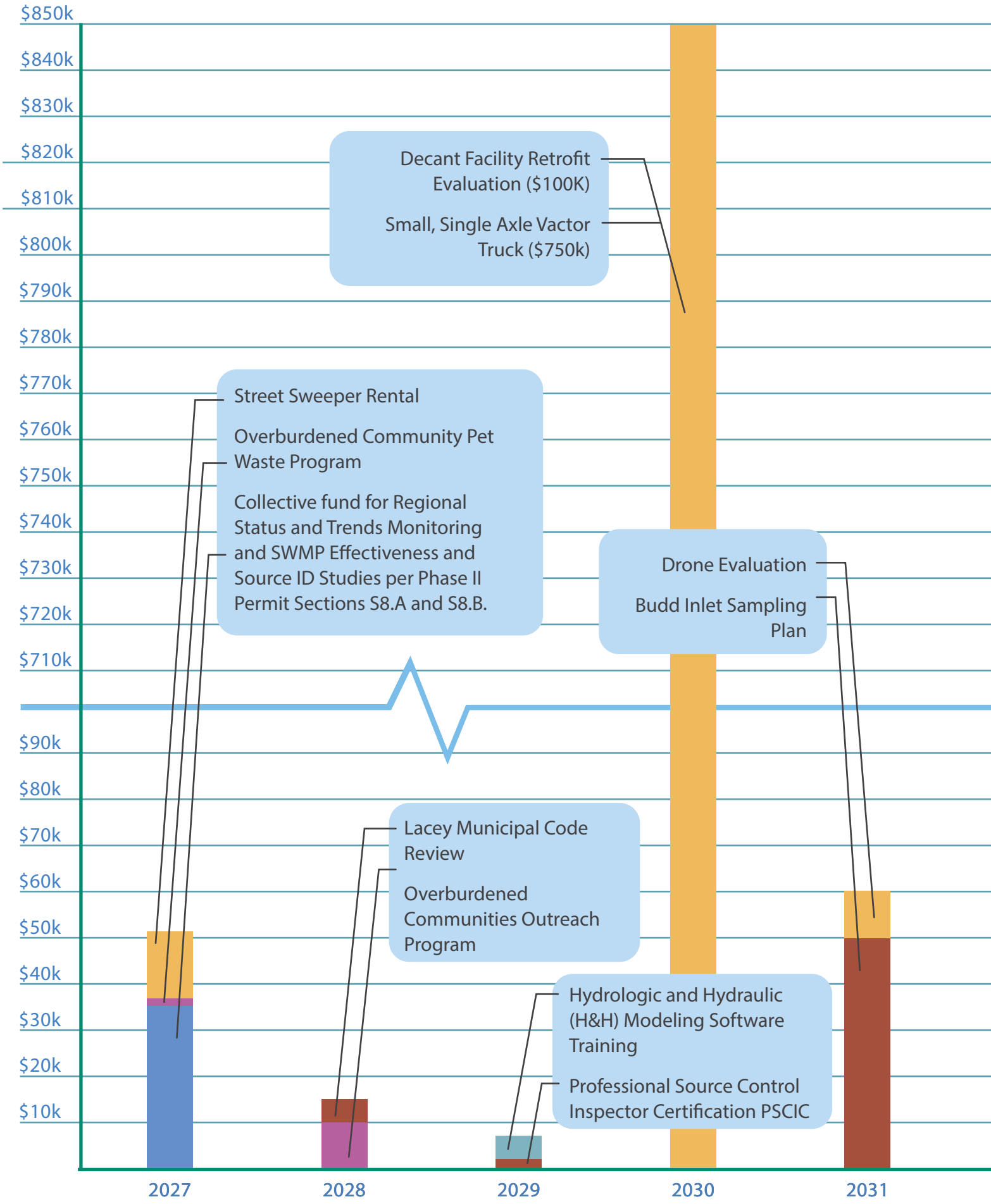


Figure 5-1. Staffing Needs.


$850k
$840k
$830k
$820k
$810k
$800k
$790k
$780k
$770k
$760k
$750k
$740k
$730k
$720k
$710k
$90k
$80k
$70k
$60k
$50k
$40k
$30k
$20k
$10k
2027
2028
2029
2030
2031
Decant Facility Retrofit Evaluation ($100K)
Small, Single Axle Vactor Truck ($750k)
Street Sweeper Rental
Overburdened Community Pet Waste Program
Collective fund for Regional Status and Trends Monitoring and SWMP Effectiveness and Source ID Studies per Phase II Permit Sections S8.A and S8.B.
Drone Evaluation
Budd Inlet Sampling Plan
Lacey Municipal Code Review
Overburdened Communities Outreach Program
Hydrologic and Hydraulic (H&H) Modeling Software Training
Professional Source Control Inspector Certification PSCIC

Outside Support Needs

Outside support needed for the required and recommended future activities in the 9-year planning horizon (2027 through 2035) are included in the figure below. The bars represent the anticipated additional outside support need for all required and recommended future activities. The color of the bars represent the primary program element for each activity.

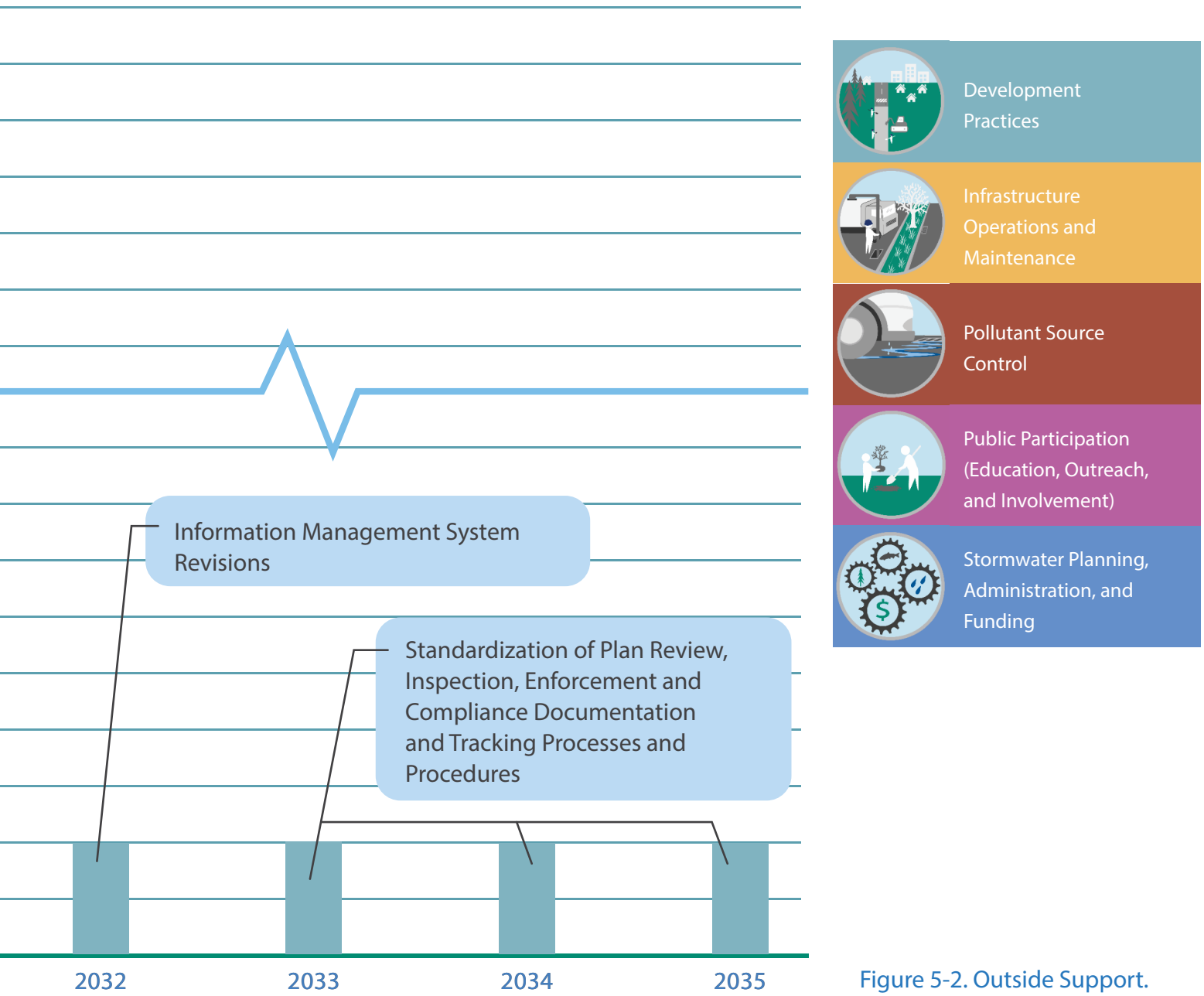


Figure 5-2. Outside Support.

5.2 Capital Improvement Program and Maintenance Programs

5.2.1 Capital Improvement Program

The proposed implementation scheduled for Lacey's stormwater Capital Improvement Program (CIP) is included in Table 5-2 below. This table is organized by project number and is based on the stormwater capital project prioritization outlined in Chapter 4 of this plan. Projects assigned higher priority are anticipated to be implemented before projects with a lower priority, contingent on available funding and resources.

The majority of the stormwater capital projects are from 2025, when the plan update started. However, some of the stormwater capital projects date back to 2013, when the projects were identified in the 2013 Stormwater Comprehensive Plan (Lacey 2013). These projects were previously deferred due to lower priority at the time, but the projects are still important and remain a priority for Lacey to complete. Each of these 2013 projects has since been reviewed and updated to reflect current conditions and priorities.

Stormwater Pipe Installation

Table 5-2. Stormwater Capital Improvement Program Implementation Schedule.							
#[a]	Project Name	2027	2028	2029	2030	2031	
13-9	Clearbrook Drainage System		$150,000	$150,000	$150,000	$300,000	
13-12	Belair-Impala Stormwater Improvements		$120,000	$120,000	$120,000	$1,220,000	
13-17	Shady Lane Treatment Facility Improvements	$130,000	$130,000	$130,000	$130,000	$1,080,000	
25-2	Ruddell & 32nd Facility Retrofit	$250,000	$250,000	$250,000	$500,000	$500,000	
25-3	28th Court NE Pond Rehabilitation				$120,000	$120,000	
25-5	Hawks Ridge Drywell Replacement	$160,000	$160,000	$160,000	$160,000	$1,780,000	
25-6	Wedgewood Manor – Clearwater Court Flood Reduction				$60,000	$60,000	
25-9	Lacey Street Stormwater Improvements						
25-11	Pattison Lake Drive SE Improvements						
25-12	Stormwater Lift Station 01 Improvements (SW LS-01)	$150,000	$200,000	$150,000	$1,800,000		
25-13	Woodland Creek at Martin Way Stormwater Improvements Study	$140,000	$140,000				
25-21	Glen Mary Drive Stormwater Improvements		$100,000	$220,000			
25-X1	Stormwater Design Manual Update	$150,000					
25-X2	Stormwater Strategic Plan Update				$150,000	$150,000	
	Total	$955,000	$1,250,000	$1,180,000	$3,190,000	$5,360,000	

[a] 25-x = New CIP Projects for 2025. All costs in 2026 dollars.

[b] 13-x ("Carryover" status) = Unaddressed Projects from 2013 CIP List. Cost estimates updated in March 2026.

Table 5-2. Stormwater Capital Improvement Program Implementation Schedule.

#[a]	Project Name	2032	2033	2034	2035	Out Years[c]
13-9	Clearbrook Drainage System	$300,000	$2,525,000	$2,525,000		
13-12	Belair-Impala Stormwater Improvements	$1,220,000				
13-17	Shady Lane Treatment Facility Improvements					
25-2	Ruddell & 32nd Facility Retrofit	$2,500,000	$3,875,000	$3,875,000		
25-3	28th Court NE Pond Rehabilitation	$960,000				
25-5	Hawks Ridge Drywell Replacement	$1,780,000				
25-6	Wedgewood Manor – Clearwater Court Flood Reduction	$240,000				
25-9	Lacey Street Stormwater Improvements			$200,000	$150,000	$4,150,000
25-11	Pattison Lake Drive SE Improvements				$40,000	$120,000
25-12	Stormwater Lift Station 01 Improvements (SW LS-01)					
25-13	Woodland Creek at Martin Way Stormwater Improvements Study					
25-21	Glen Mary Drive Stormwater Improvements					
25-X1	Stormwater Design Manual Update	$150,000	$150,000			
25-X2	Stormwater Strategic Plan Update				$150,000	$600,000
	Total	$7,150,000	$6,400,000	$6,600,000	$340,000	$6,070,000

[c] The projects listed in the 'out years' column have not been scheduled during the planning period and are not accounted for in the financial analysis.

5.2.2 Maintenance Programs

The proposed implementation scheduled for the maintenance programs is included in Table 5-3 below. Some of these maintenance programs are not anticipated to require additional outside funding support at the time of publication. Additional outside funding will be reevaluated as the program progresses and new information becomes available.

Table 5-3. Maintenance Programs Implementation Schedule.

#[a]	Project Name	2027	2028	2029	2030	
25-MP1	Private Facility Maintenance Program for Major Maintenance Projects[b]	$0	$0	$0	$0	
25-MP2	Catch Basin Grouting Program	$0	$0	$0	$100,000	
25-MP3	Ditch and Culvert Maintenance Program	$0	$0	$0	$0	
25-MP4	Stormwater Conveyance Condition Assessment and Rehabilitation/ Replacement Program	$0	$600,000	$600,000	$600,000	
25-MP5	Pond Maintenance Program[b]	$0	$0	$0	$0	
	Total	$0	$600,000	$600,000	$700,000	

[a] 25-MPx = New Maintenance Program for 2025. All costs in 2026 dollars.

[b] This program is currently ongoing and is not anticipated to require additional outside funding support at the time of publication. Additional outside funding will be reevaluated as the program progresses and new information becomes available.

Donegal Pond Before and After Maintenance

Table 5-3. Maintenance Programs Implementation Schedule.							
#[a]	Project Name	2031	2032	2033	2034	2035	Out Year[c]
25-MP1	Private Facility Maintenance Program for Major Maintenance Projects[b]	$0	$0	$0	$0	$0	$0
25-MP2	Catch Basin Grouting Program	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
25-MP3	Ditch and Culvert Maintenance Program	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
25-MP4	Stormwater Conveyance Condition Assessment and Rehabilitation/ Replacement Program	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
25-MP5	Pond Maintenance Program[b]	$0	$0	$0	$0	$0	$0
	Total	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000

[c] The projects listed in the 'out years' column have not been scheduled during the planning period and are not accounted for in the financial analysis.

5.3 Adaptive Management

Lacey will adaptively manage the required and recommended future activities, stormwater capital projects, and maintenance programs discussed in Sections 5.1 and 5.2. As part of the adaptive management process, Lacey should take the following steps to ensure effective implementation of this plan:

Annually meet with all Operations Division (Public Works) staff to evaluate the risk of known problems and identify new problems.

Annually review the data contained in the Capital Improvement Program (CIP), Maintenance Programs, and Stormwater Management Program related chapters and appendices contained in the Stormwater Strategic Plan (SSP) and add any new information that is collected.

Annually add new potential projects and/or activities to the CIP and the Maintenance Programs during the Public Works CIP Prioritization Process using the Project Request and Rating Form.

Annually submit new projects and/or activities from the CIP, Maintenance Programs, and Stormwater Management Program into SWMP Annual Report in March accounting for Stormwater Management for Existing Development (SMED).

Maintain a stormwater problem and CIP project file, Maintenance Programs file, and Stormwater Management Program file with all information that will be useful for updating the SSP.

Review the CIP and Stormwater Management Program chapters when the SSP is updated.

Stream Team Volunteering Event

South Sound Global Rivers Environmental Education Network (GREEN)

5.4 Interdepartmental Collaboration

Lacey's Stormwater Management Program (SWMP) is led by Stormwater Section staff in the Water Resources Division of the Public Works Department. The Water Resources Division works closely with the following Lacey departments and divisions on the program elements and long-term goals (listed in no particular order):

Flood Reduction

- Engineering Division (Public Works Department)
- Operations Division (Public Works Department)
- Community and Economic Development Department

Surface Water Quality Improvement

- Parks, Culture & Recreation Department
- Parks and Facilities Maintenance Division (Public Works Department)
- Operations Division (Public Works Department)

Groundwater Protection and Recharge

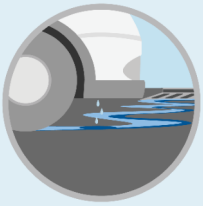
- Engineering Division (Public Works Department)
- Water Utility Operations Division (Public Works Department)
- City Attorney's Office

Habitat Improvement

- Parks, Culture & Recreation Department
- Communications Department
- City Attorney's Office

Public Participation (Education, Outreach, and Involvement)

- Parks, Culture & Recreation Department
- Communications Department
- Community and Economic Development Department
- City Attorney's Office



Pollutant Source Control

- Public Works Department
- Community and Economic Development Department
- Communications Department
- Police Department
- Joint Animal Services
- Finance Department
- Parks, Culture & Recreation Department

Infrastructure Operations and Maintenance

- Parks and Facilities Maintenance Division (Public Works Department)
- Operations Division (Public Works Department)
- Engineering Division (Public Works Department)
- Finance Department

Development Practices

- Engineering Division (Public Works Department)
- Operations Division (Public Works Department)
- Community and Economic Development Department

Stormwater Planning, Administration, and Funding

- Public Works Department
- Community and Economic Development Department
- Finance Department
- Communications Department

5.5 Interagency Collaboration

To address ongoing regional coordination needs, Lacey should continue to collaborate with regional partners and other local governments in shared drainage basins to protect groundwater and surface water quality and to manage and treat stormwater effectively. Lacey works closely with the following organizations on the program elements and long-term goals (listed in no particular order):

Flood Reduction

- Washington State Department of Transportation (WSDOT)
- Thurston County
- Thurston Regional Planning Council (TRPC)

Surface Water Quality Improvement

- Ecology
- WSDOT
- Thurston County
- Water Resource Inventory Area (WRIA) 13
- Nisqually Tribe
- Squaxin Island Tribe

Groundwater Protection and Recharge

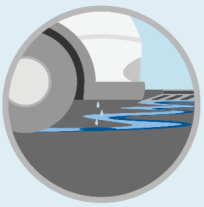
- Ecology
- Washington State Department of Health
- Lacey, Olympia, Tumwater, Thurston County (LOTT) Clean Water Alliance
- TRPC
- Thurston County
- Other water utility and satellite management agencies

Habitat Improvement

- Nisqually Indian Tribe
- Nisqually River Education Project
- Nisqually River Council
- Squaxin Island Tribe
- WRIA 13 Lead Entity
- Capital Land Trust
- Oly Ecosystems
- Washington Department of Fish and Wildlife (WDFW)
- U.S. Fish and Wildlife Service (USFWS)
- Deschutes Estuary Restoration Team
- Deschutes Estuary Restoration Project with Ecology
- Cities of Olympia and Tumwater through Regional Environmental Education Partnership (REEP)
- Thurston County through REEP
- TRPC
- North Thurston Public Schools
- King County Department of Natural Resources (DNR)
- Pacific Shellfish Institute
- Thurston Conservation District
- PARC Foundation
- Washington Recreation and Conservation Office
- Pacific Education Institute
- LOTT Clean Water Alliance

Public Participation (Education, Outreach, and Involvement)

- Nisqually Indian Tribe
- Nisqually River Education Project
- Nisqually River Council
- Squaxin Island Tribe
- WRIA 13 Lead Entity
- Capital Land Trust
- Oly Ecosystems
- WDFW
- USFWS
- Deschutes Estuary Restoration Team
- Deschutes Estuary Restoration Project with Ecology
- Cities of Olympia and Tumwater through REEP
- Thurston County through REEP
- TRPC
- North Thurston Public Schools
- King County DNR
- Pacific Shellfish Institute
- Thurston Conservation District
- PARC Foundation
- Washington Recreation and Conservation Office
- Pacific Education Institute
- LOTT Clean Water Alliance



Pollutant Source Control

- Thurston County
- Ecology
- Other Municipalities
- Lacey Fire District 3
- Washington Stormwater Center
- LOTT Clean Water Alliance

Infrastructure Operations and Maintenance

- Thurston County
- WDFW
- LOTT Clean Water Alliance
- Ecology
- Libby Labs
- Republic Services
- Lacey Fire District 3

Development Practices

- Thurston County
- TRPC
- LOTT Clean Water Alliance

Stormwater Planning, Administration, and Funding

- Ecology
- Olympia
- Thurston County

6.0 REFERENCES

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Appendix A

Detailed Stormwater Goals and Policies

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Detailed Stormwater Goals and Policies

City staff developed long-term goals for each Stormwater Management Program (SWMP) element below. Program elements are a comprehensive list of functions performed or influenced by Lacey's SWMP. This appendix lists policies from the previous Stormwater Comprehensive Plan developed in 2020 (Lacey 2020) related to each long-term goal. Policies that apply to multiple program elements are indicated with an asterisk.

- Flood Reduction: There is no flooding of the public stormwater system from the 100-year storm.

  FC1. Comply with all applicable requirements from federal, state, and local governments related to flood protection

  FC2. Develop new drainage projects for the Capital Improvement Program (CIP) plan to address flooding problems when these problems cannot be addressed through maintenance of existing infrastructure

  FC3. Continue to encourage and allow the use of Low Impact Development (LID) Best Management Practices (BMPs) for flow control for new development and redevelopment in accordance with current regulations *

  FC4. Provide adequate stormwater conveyance in the public storm drain system as follows:

    - Accommodate the 10-year 24-hour event from existing development within the public storm drain system, except as noted in the three bullets below
    - Accommodate the 25-year 24-hour event from existing development for storm drains and culverts that pass under public roads
    - Accommodate the 25-year 24-hour event from existing development within the long-term UGA boundary public right-of-way without having water over more than 50 percent of the driving lane
    - Accommodate the 100-year 24-hour event from existing development for culverts and bridges that convey natural channels

- Surface Water Quality Improvement: All surface waterbodies in Lacey meet water quality criteria for designated recreation and fish uses.

  WQ1. Comply with all applicable requirements from federal, state, and local governments related to water quality *

  WQ2. Develop new water quality treatment projects for the CIP plan when these problems cannot be addressed through source control or maintenance of existing infrastructure *

WQ3. When practicable, add or improve water quality treatment whenever constructing new stormwater infrastructure or conducting maintenance, repair, rehabilitation, or replacement of aging City stormwater infrastructure *

WQ4. Protect surface water quality by addressing potential nutrient loading from stormwater *

- Ground Water Quality Protection: Groundwater quality and quantity is not negatively affected by stormwater practices.

WQ5. Protect groundwater resources by regulating land use activities, such as requiring a higher level of stormwater treatment within wellhead protection areas, and encouraging practices that minimize impacts to groundwater, such as preserving native vegetation or planting low-input vegetation

WQ6. Protect groundwater quality by requiring monitoring for deep underground injection wells (UICs)

- Habitat Improvement: Aquatic species thrive in and along surface waterbodies in Lacey.

G2. Improve public knowledge of stormwater runoff issues, encourage public involvement in stewardship activities, and encourage public support for the City's SWMP *

G3. Ensure that new development, redevelopment, and City projects are in conformance with the City's adopted stormwater requirements *

G4. Analyze proposed new development and redevelopment for potential impacts on the downstream storm drainage system and water quality as part of the stormwater plan review process *

G10. Oversee construction and maintenance of privately owned stormwater facilities to ensure that they function as designed to protect private property, public property, and the environment *

FC3. Continue to encourage and allow the use of LID BMPs for flow control for new development and redevelopment in accordance with current regulations *

WQ1. Comply with all applicable requirements from federal, state, and local governments related to water quality *

WQ2. Develop new stormwater treatment projects for the CIP plan when these problems cannot be addressed through source control or maintenance of the existing infrastructure *

WQ3. When practicable, add or improve water quality treatment whenever constructing new stormwater facilities or conducting maintenance, repair, rehabilitation, or replacement of aging City stormwater facilities *

WQ4. Protect surface water quality by addressing potential nutrient loading from stormwater *

- **Public Participation (Education, Outreach, and Involvement):** City residents understand how their actions and choices affect stormwater, and they act in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.

  G2. Improve public knowledge of stormwater runoff issues, encourage public involvement in stewardship activities, and encourage public support for the City's SWMP *

- **Pollutant Source Control:** Pollutants do not enter stormwater, groundwater, or surface waterbodies.

  G2. Improve public knowledge of stormwater runoff issues, encourage public involvement in stewardship activities, and encourage public support for the City's SWMP *

  G3. Ensure that new development, redevelopment, and City projects are in conformance with the City's adopted stormwater requirements *

  G4. Analyze proposed new development and redevelopment for potential impacts on the downstream storm drainage system and water quality as part of the stormwater plan review process *

  G10. Oversee construction and maintenance of privately owned stormwater facilities to ensure that they function as designed to protect private property, public property, and the environment *

  FC4. Continue to encourage and allow the use of LID BMPs for flow control for new development and redevelopment in accordance with current regulations *

- **Infrastructure Operations and Maintenance:** All stormwater infrastructure operates as intended.

  G6. Construct new or improved stormwater facilities in accordance with the current CIP plan and stormwater design manual (SDM)

  G11. Proactively maintain, repair, rehabilitate, and replace aging City stormwater facilities and minimize the need for costly and disruptive emergency repairs

- **Development Practices:** Runoff from developed areas mimics forested hydrology and water quality. Equitable service is provided to applicants for development projects.

  G3. Ensure that new development, redevelopment, and City projects are in conformance with the City's adopted stormwater requirements *

  G4. Analyze proposed new development and redevelopment for potential impacts on the downstream storm drainage system and water quality as part of the stormwater plan review process *

  G10. Oversee construction and maintenance of privately-owned stormwater facilities to ensure that they function as designed to protect private property, public property, and the environment *

FC5. Continue to encourage and allow the use of LID BMPs for flow control for new development and redevelopment in accordance with current regulations *

- Stormwater Planning, Administration, and Funding: Revenue is wisely invested and produces measurable positive outcomes, including regulatory compliance. Utility rates are fair and equitable.

G1. Continue to develop and implement a comprehensive SWMP consistent with requirements of the federal Clean Water Act, the Phase II Permit issued by the Washington State Department of Ecology, the state Growth Management Act, and the Puget Sound Action Agenda

G5. Coordinate with other departments throughout the stormwater plan review, permitting, and project approval process to ensure that the process results in a functional stormwater system

G7. Review the CIP list annually to identify new projects, remove completed projects, refine planned projects, and reevaluate project prioritization

G8. Participate in the development and implementation of regional water quality management plans, groundwater management plans, stormwater management plans, lake management plans, drainage basin plans, watershed action plans, and wellhead protection plans to ensure that Lacey's water resources are protected

G9. Continue to work cooperatively with other local governments through joint basin planning in shared drainage basins to provide regionally coordinated planning, construction, and maintenance for regional stormwater facilities.

G12. Revise this Stormwater Comprehensive Plan every 6 years, or sooner if needed, to ensure that it provides for effective long-term stormwater project planning, system maintenance, response to regulatory requirements, and program funding

M1. Prioritize the most beneficial and cost-effective projects and programs to ensure that available resources are used efficiently

M2. Implement an equitable and logical stormwater utility rate structure

M3. Review the rate structure and projected future rates and expenses on a regular basis to ensure that utility rates will adequately fund implementation of this plan

M4. Actively seek outside funding to leverage or complement utility funds in order to implement this plan

Appendix B

Surface Waterbodies

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The Receiving Water Assessment is an excerpt of the Lacey's Stormwater Management Action Plan (SMAP) developed in March 2023. This document provides an overview of the Lacey's surface waterbodies as of March 2023 and may not reflect current conditions.

Receiving Water Assessment

The goal of the Receiving Water Assessment (RWA) was to assess existing information regarding local receiving waters and contributing drainage basin areas, to identify which receiving waters are most likely to benefit from stormwater management planning.

This process began with listing and describing the primary receiving waters, watershed data, and conditions, then assessing the relative influence of stormwater management actions and identifying those basins to be included in a more detailed prioritization process for development of the SMAP.

Surface Waters Inventory

City of Lacey Receiving Waters & Watershed Inventory

Receiving Water Watershed	Downstream Discharge Point	Watershed Area Within Lacey	Percent of Lacey Within Watershed	Percent Impervious
Woodland Creek	Henderson Inlet, Puget Sound	11.7 sq. mi.	66.5%	33%
Woodard Creek	Henderson Inlet, Puget Sound	0.2 sq. mi.	1.1%	67%
Chambers Lake/Creek	Deschutes River, Puget Sound	3.1 sq. mi.	17.5%	43%
McAllister Creek	Nisqually Reach, Puget Sound	2.6 sq. mi.	15.0%	41%

The following is a listing of waterbodies that are either within the Lacey city limits, within Lacey's Urban Growth Area (UGA), or outside of the City limits and the UGA but receive drainage from within the city. Within those three categories, surface waters are grouped by the watershed they are located within: Henderson Inlet Watershed, Deschutes River Watershed, or Nisqually River Watershed.

A. Water Bodies Within the City Limits

Four lakes and one major stream system are located within the City limits. These waterbodies are all part of the Henderson Inlet Watershed, with one exception; Chambers Lake is part of the Deschutes Watershed.

Henderson Inlet Watershed

- Woodland Creek
- Hicks Lake
- Southwick Lake
- Long's Pond

Deschutes Watershed

- Chambers Lake

B. Water Bodies Within the Urban Growth Area

Five streams are located within the UGA; four of these streams are part of the Henderson Inlet watershed and one is part of the Nisqually watershed.

Henderson Inlet Watershed

- Eagle Creek
- Fox Creek
- Jorgenson Creek
- Palm Creek

Nisqually Watershed

- Little McAllister Creek

C. Water Bodies Receiving Surface Water or Stormwater from Within the City Limits

The following waterbodies receive surface water or stormwater discharges from within the City limits.

Henderson Inlet Watershed

- Henderson Inlet
- Lake Lois
- Long Lake
- Pattison Lake
- Woodard Creek

Deschutes Watershed

- Deschutes River / Budd Inlet

Nisqually Watershed

- Nisqually Reach (Puget Sound)

Delineation & Existing Conditions

Lacey surface runoff flows to one of three watersheds on Puget Sound - Henderson Inlet, Deschutes River, or Nisqually River – via one of four primary drainage systems. Woodland Creek and Woodard Creek both flow to Henderson Inlet; Chambers Lake flows via Chambers Ditch to Chambers Creek which is tributary to the Deschutes River, and ultimately to Budd Inlet; and McAllister Creek flows to Nisqually Reach. These three Puget Sound watersheds and the four primary drainage systems feeding them are described in the following sections.

Henderson Inlet Watershed

Bound on the east and west by the Nisqually Reach of Puget Sound and Budd Inlet, respectively, Henderson Inlet is one of five inlets that contribute to South Puget Sound. The drainage basin area of Henderson Inlet is approximately 1,190 acres within the city limits and UGA. Woodland Creek and Woodard Creek are the two primary drainage systems in the Henderson Inlet watershed; combined they drain 80 percent of the inlet, while Dobbs Creek (East Creek), Meyer Creek (Snug Creek), and Sleepy Creek (Libby Creek), and several other small streams account for the remaining 20 percent.

High levels of fecal coliform bacteria in the lower portion of Henderson Inlet have prohibited commercial shellfish harvesting since the 1980s. In 2001, the Thurston County Commissioners created the Henderson Inlet shellfish protection district. The district is composed of an appointed local stakeholder group, who develop water quality restoration recommendations. The district stakeholders currently meet every other month to discuss water clean-up plans for the area (Thurston County 2012).

Henderson Inlet is on Ecology's 303(d) list (Category 5) for dissolved oxygen and has a TMDL (Total Maximum Daily Load) water quality improvement plan (Category 4A) for fecal coliform bacteria, dissolved oxygen, temperature, and pH (Ecology 2019). Several of its tributaries, including Dobbs Creek, Sleepy Creek, Woodland Creek, Woodard Creek, College Creek, Jorgenson Creek, Eagle Creek, Fox Creek, and Palm Creek are also on Ecology's 303(d) list (Category 4A or 5) for one or more violations of fecal coliform bacteria, temperature, dissolved oxygen, or pH.

Under the Henderson Inlet TMDL, the Cities of Lacey and Olympia have a coordinated plan to monitor and reduce fecal coliform bacteria discharged from the Fones Road Stormwater Treatment facility which drains to Woodard Creek via the Taylor wetland. The construction of the Fones facility led to a reduction in fecal coliform bacteria loading to Woodard Creek. The City of Lacey also implements a wet weather sampling program for fecal coliform bacteria discharging from the College Regional Stormwater Facility and conducts re-vegetation and nuisance vegetation management along Woodland Creek and its tributaries.

Deschutes River Watershed

The Deschutes River is home to many fish species including Coho, Chinook, and chum salmon and flows 57 miles from the Gifford Pinchot National Forest in Lewis County to Budd Inlet in Olympia. The Deschutes River has a total basin area of 162 square miles. The upper and mid-watershed is comprised of forested, rural residential and agricultural areas; the lower watershed consists of primarily urban areas from the surrounding cities of Tumwater, Olympia, and Lacey (Thurston County 2010). Discharge from Big Chambers Lake flows through Little Chambers Lake (located in the City of Lacey), which discharges to the Deschutes River via Chambers Ditch and Chambers Creek. The lower reach of the Deschutes River discharges to South Puget Sound through Capitol Lake and Budd Inlet.

The Deschutes River enters Capitol Lake from the south. Capitol Lake was created in 1951 as a reflecting pool for the Capitol Building in Olympia. Capitol Lake has a drainage basin area of 185 square miles, collecting runoff from commercial forestry, agriculture, and rural residential areas. Urban land uses from areas within the Cities of Olympia and Tumwater contribute to the lower portion of the watershed.

In 1998, the Deschutes River was placed on Ecology's 303(d) list for temperature, fecal coliform bacteria, dissolved oxygen, and fine sediment. Since then, efforts have been made to identify pollution sources, and in 2008, Ecology conducted a TMDL study of the river. Low dissolved oxygen levels in the river have been caused by excess nutrients and algae growth (Roberts and Pelletier 2007). The Deschutes River is currently listed on Ecology's 303(d) list for fine sediment, temperature, pH, bacteria, and dissolved oxygen (Ecology 2019).

Nisqually Reach Watershed

Puget Sound is the largest fjord-like estuary in the continental United States. Located between the Cascade and Olympic mountain ranges in Washington State, the Puget Sound basin covers more than 16,800 square miles of land and water (Hart Crowser et al. 2007). The basin is made up of a series of interconnected underwater basins, separated by shallow ridges or sills. The drainage basins in the City primarily discharge to Henderson Inlet; however, some surface water discharges to Budd Inlet and directly to Puget Sound (in the Nisqually Reach). The Nisqually Reach section of Puget Sound is fed by the Nisqually River. The City's contribution to water quality in the Nisqually Reach is primarily due to stormwater and surface water flows from Little McAllister Creek.

The Nisqually Reach section of Puget Sound is on Ecology's 303(d) list (Category 5) for fecal coliform bacteria.

Woodland Creek Drainage System

Woodland Creek originates in a horseshoe-shaped chain of lakes connected by extensive wetlands in southeast Lacey. Hicks Lake flows into Pattison Lake, which then flows into Long Lake. From the north end of Long Lake, Woodland Creek flows through Woodland Creek Community Park, past Long's Pond to Lake Lois. From Lake Lois, the creek carves a narrow ravine through forest land, crosses Martin Way and Interstate 5, and then flows through rolling hills and wetland before ultimately discharging to the southern tip of Henderson Inlet. A total of 2.4 miles of the creek lies within the City limits, and a total of 1.9 miles of the creek lies within City-owned parcels in the UGA. The contributing basin area is 16,560 acres, 79 percent of which is within the Lacey city limits and UGA. The basin consists primarily of urban and rural residential areas as well as commercial areas, and suburban residential development is rapidly increasing in the headwater areas near the mouth of the basin. The stream segment between Lake Lois and the springs north of Martin Way typically dries up during the summer months, significantly reducing fish habitat and productivity in the upper reach of the creek.

Pollutants from urban stormwater runoff have contributed to declining water quality in Woodland Creek. Pet wastes and failing septic systems were identified as common sources of bacteria in stormwater runoff in residential settings and rural settings in the previous water quality assessment (Thurston County 2007). Despite continued efforts to improve water quality, Woodland Creek has consistently failed to meet water quality standards for fecal coliform bacteria and currently has a TMDL (Category 4A) for fecal coliform bacteria along with several tributaries located in the UGA (described in the following section) (Ecology 2019). Bacterial pollution, largely from Woodland Creek, affects shellfish harvests in Henderson Inlet. Much of the pollution in the rural area was historically caused by failing on-site sewer systems and agricultural practices (Thurston County 2010). In 2001, Thurston County responded by establishing the Henderson Shellfish Protection District (Thurston County 2010). In 2005, the Thurston County Board of Health created the Henderson Watershed Protection Area, which requires inspection of all on-site sewage systems in the Henderson Watershed area. Additional measures to reduce pollutant loads in the stream include implementation of agricultural BMPs, new stormwater treatment facilities and improved farm planning and public education. These pollution reduction efforts have shown positive results, and in 2010, commercial shellfish harvest area increased by 240 acres due to improving water quality (Thurston County 2010). In June 2012, the Washington State Department of Health announced that 100 acres of commercial shellfish harvest area have also reopened to harvest (WADOH 2012), though 26 acres were classified as 'restricted' in 2018 (WADOH 2018).

Woodland Creek is included on Ecology's 303(d) list as part of the Henderson Inlet Total Maximum Daily Load (TMDL) for fecal coliform bacteria, dissolved oxygen, and pH impairment (Ecology 2019). The stream also exhibits high concentrations of total phosphorus and nitrate (Thurston County 2010) and high temperatures (Ecology 2019). The lower reach of the creek is also listed as Category 4C for instream flow ("intensified peak flows" from stormwater runoff), though recent flow control improvements in the

basin are expected to reduce these peak flows. Other projects to improve water quality in Woodland Creek include the septic to sewer conversions in Woodland Creek Estates and rain garden improvements by Thurston County in the Tanglewilde neighborhood.

Woodard Creek Drainage System

Woodard Creek, part of the Henderson Inlet Watershed, flows 7.5 miles along the west outskirts of the City. Woodard Creek drains a basin of 4,910 acres, comprised of urban and rural residential as well as commercial areas (Thurston County 2010). Wetlands are located along the depressions and hills following the length of the stream, and collect runoff from high-density commercial areas in Lacey and Olympia. The Taylor Wetland at the headwaters of the stream in Olympia is surrounded by industrial and commercial development, and the estuarine wetland located at the stream's mouth is currently protected from development by the Washington State Department of Natural Resources.

The water quality of Woodard Creek has been impaired over the years due to harmful pollutants in urban runoff and rural activities (Thurston County 2010). The inlet of Woodard Creek, located in the center of the City, is polluted mainly by stormwater runoff. The middle section of the stream is surrounded by more urban areas, and has a higher potential for pollution from agriculture, livestock, and septic systems. Woodard Creek has a TMDL for fecal coliform bacteria and dissolved oxygen (Category 4A) (Ecology 2019). The TMDL study conducted in 2006 determined that reduction of fecal coliform bacteria is necessary to meet water quality standards. Efforts to improve the water quality of the stream and reduce pollution have been made over the years by targeting these point sources and implementing agricultural BMPs in the surrounding area (Thurston County 2010).

Chambers Lake Drainage System

Chambers Lake is part of the Chambers Basin in the Deschutes Watershed. Little and Big Chambers Lake, previously one large lake, were separated into two lakes after the construction of the Chehalis Western Railroad in 1927, and are now connected with a 500 foot-long channel. The boundary that separates the City of Lacey from the City of Olympia lies between the two lakes, therefore Big Chambers Lake is primarily within the City of Olympia while Little Chambers Lake is located in the City of Lacey. Chambers Basin also includes Chambers Ditch and Chambers Creek.

Lacey and Olympia share jurisdiction of Big Chambers Lake, while the City of Lacey alone has jurisdiction of Little Chambers Lake. The drainage basin contributing to both lakes is 950 acres. Discharge from Big Chambers Lake flows through Little Chambers Lake, which discharges to the Deschutes River via Chambers Ditch and Chambers Creek southwest of Lacey. The shoreline of both lakes includes a variety of wetland habitats.

Big Chambers and Little Chambers Lakes are similar in size and depth, with areas of 68 and 58 acres and maximum depths of 5 and 7 feet, respectively. Big Chambers Lake has no inlets and is fed only by groundwater and stormwater runoff. The water level tends to fluctuate with the seasons (Thurston County 1995). The areas to the south of these lakes have experienced flooding related to groundwater and surface water that has deemed it unsuitable for stormwater infiltration to support new development.

Both Little and Big Chambers Lakes are classified as eutrophic and have dense populations of aquatic plants, despite efforts to reduce plant growth with the introduction of grass carp in 1990 (Thurston County 1995). Historically, many species of fish inhabit this lake, including cutthroat trout, bass, perch, catfish, crappie and spiny ray; however, over the years, cutthroat trout population has greatly declined (Thurston County 1995). In 2015, the City constructed the Chambers Lake Stormwater Treatment Facility to provide stormwater treatment for 187 acres of primarily residential area straddling busy College Street in Lacey that drains into Little Chambers Lake.

Little McAllister Creek Drainage System

Little McAllister Creek, located within the McAllister/Eaton Creek Basin and the Nisqually Watershed, originates in the spring-fed wetlands. The stream loses a total of 180 feet in elevation over 2 miles as it flows through a steep ravine, and ultimately discharges into agricultural ditches. The stream forks into two branches that flow to the south and to the west (Thurston County 2004). The Little McAllister sub-basin is 2,170 acres and accounts for seven percent of the total McAllister/Eaton Creek Basin. A TMDL study of dissolved oxygen and bacteria in McAllister Creek and the Nisqually Watershed was conducted in 2005 and determined that a 74 percent reduction in fecal coliform bacteria in Little McAllister Creek was needed to meet water quality standards (Ecology 2005), though Lacey is not part of the current TMDL implementation plan.

Beneficial Uses

The beneficial-use portion of the assessment identified two criteria in each receiving water basin: fish habitat (particularly salmon) and recreational use.

Salmon have been documented in local waters by the Washington Department of Fish and Wildlife. Woodland Creek, Woodard Creek, and McAllister Creek have all been known to host salmon. The table below summarizes documented spawning and presence of the listed salmonid species. Fish habitat scoring for prioritization is based on the number of species documented as present and the number documented using the creek for spawning.

Recreational use includes fishing, which people attempt in virtually any surface waters, even those with minimal stocks; and boating and swimming, which is generally limited to the lakes in the upper reaches of the Woodland Creek drainage system, where boat

launches and shoreline parks provide recreational access. Recreational uses in the other three watersheds are minimal in comparison to the Woodland Creek system.

City of Lacey Watersheds – Salmonid Occurrence

	Documented Spawning	Documented Presence
Woodland Creek	Yes - Fall Chinook, Fall Chum, Coho	Coho and Steelhead from Henderson Inlet to Long Lake
Woodard Creek	Yes - Coho and Fall Chum in lower reaches	Coho, Winter Steelhead
Chambers Creek	None documented	No natural presence documented
McAllister Creek	Yes - Fall Chinook, Winter Chum	Sockeye, Coho, Winter Steelhead

Source: WDFW SalmonScape map tool, 2022

City of Lacey Watersheds - Beneficial Uses

Receiving Water Watershed	Downstream Discharge Point	Recreational Use	Salmonids	Beneficial Use Score
Woodland Creek	Henderson Inlet, Puget Sound	High – Swimming and Boating in Lakes	Yes	High
Woodard Creek	Henderson Inlet, Puget Sound	Low	Yes	Medium
Chambers Lake/Creek	Deschutes River, Puget Sound	Low	No	Low
McAllister Creek	Nisqually Reach, Puget Sound	Low	Yes	Medium

Basin Condition: Impairment & Degradation

Impairment criteria and degradation level are used to assess basin conditions and impacts on beneficial uses. The following describe the three basin conditions used to assess impairment, and the five degradation levels used to assess each condition, as part of the prioritization process in the SMAP.

Percent Impervious Land Cover is a measure of the degree to which urbanization has occurred within a basin. The scale ranges from "intact" (<2% impervious cover) to "sensitive" (2% to 10%) to "impacted" (10% to 25%) to "degraded" (25% to 40%) to "highly degraded" (>40% impervious cover).

	Percent Impervious				Projection	"Current" 2016 Score	"Future" 2045 Score
BASIN NAME	2001	2006	2011	2016	**2045**		
Woodland Creek	19.9%	22.5%	23.8%	24.3%	30.2%	3	4
Woodard Creek	14.2%	14.9%	15.4%	15.5%	18.3%	3	3
Chambers Lake/Creek	17.3%	20.4%	21.2%	21.5%	24.0%	3	3
McAllister Creek	6.7%	7.3%	7.6%	8.0%	9.9%	2	2

Percent Forest Cover is a measure of the degree to which a basin has undergone a change in native land cover. The scale ranges from "intact" (>80% forest cover) to "sensitive" (65% to 80%) to "impacted" (45% to 65%) to "degraded" (30% to 45%) to "highly degraded" (<30% forest cover).

	Percent Forest Cover				Projection	"Current" 2016 Score	"Future" 2045 Score
BASIN NAME	2001	2006	2011	2016	**2045**		
Woodland Creek	34.8%	32.4%	30.8%	29.2%	26.9%	5	5
Woodard Creek	36.4%	35.9%	35.1%	35.1%	34.2%	4	4
Chambers Lake/Creek	27.8%	24.1%	22.9%	22.6%	21.8%	5	5
McAllister Creek	53.5%	50.0%	49.0%	48.3%	47.7%	3	3

Percent Intact Riparian Cover is a measure of the degree to which lands along surface waters have undergone change in native vegetation cover. The scale ranges from "intact" (>90% intact riparian cover) to "sensitive" (75% to 90%) to "impacted" (60% to 75%) to "degraded" (30% to 60%) to "highly degraded" (<30% intact riparian cover).

	Percent Intact Riparian Cover				Projection
BASIN NAME	2001	2006	2011	2016	**2045**
Woodland Creek	78.6%	78.0%	76.6%	76.1%	76.1%
Woodard Creek	72.5%	72.5%	71.6%	71.7%	71.7%
Chambers Lake/Creek	57.7%	56.8%	55.0%	55.0%	55.0%
McAllister Creek	53.3%	54.9%	54.4%	54.2%	54.2%

"Current" 2016 Score	"Future" 2045 Score
2	2
3	3
4	4
4	4

Summary of Basin Conditions

	BASIN CONDITION				Projection
BASIN NAME	2001	2006	2011	2016	**2045**
Woodland Creek	Impacted	Impacted	Impacted	Impacted	**Degraded**
Woodard Creek	Impacted	Impacted	Impacted	Impacted	Impacted
Chambers Lake/Creek	Degraded	Degraded	Degraded	Degraded	Degraded
McAllister Creek	Impacted	Impacted	Impacted	Impacted	Impacted

LEGEND:

	Score
• **Intact** — Intact basins have little to no impervious surfaces, a nearly complete forest canopy, and vegetated riparian corridors. Water bodies are in excellent condition.	1
• **Sensitive** — Sensitive basins have minimal impervious area, considerable forest cover, and riparian corridors with few breaks in protective buffer. Water bodies are in good condition.	2
• **Impacted** — Impacted basins are moderately urbanized, with some remaining forest cover. Riparian corridors are cleared in many places and water quality is fair.	3
• **Degraded** — Degraded basins are urbanized with limited remaining forest canopy or vegetated riparian areas. Water quality is poor, with multiple impairments.	4
• **Very Degraded** — Highly degraded stream basins generally have poor water quality and support a low diversity of aquatic species.	5

Source: "Thurston County Current And Future Basin Conditions Assessment"
Thurston Regional Planning Council, May 2021

City of Lacey Watersheds - Water Quality

Receiving Water Watershed	WQI - Overall Thurston County Water Quality Index	TC Monitoring Location	303d List	TMDL	Water Quality Score
Woodland Creek	27 = High Concern	Woodland Creek at Draham Road	Yes	Yes	High
Woodard Creek	52 = Moderate Concern	Woodard Creek at Libby Road	Yes	Yes	Medium
Chambers Lake/Creek	73 = Moderate Concern	Chambers Creek at Deschutes River	Yes	Yes	Low
McAllister Creek	N.A.	N.A.	Yes	Yes	Medium

Water Quality Index (WQI) is 2018-2019 data, from April 2020 TC Water Resources Monitoring Report.
WQI Scale = 0 to 100 corresponding to Level of Concern for Impairment; lower score = higher concern.

City of Lacey Watersheds - Stormwater Management Potential

Receiving Water Watershed	Stormwater Management Influence Assessment	Prioritization Notes
Woodland Creek	Moderate/High - many storm facilities, but more potential	Most of city is within this watershed; most need and opportunities for WQ retrofits; thus highest priority
Woodard Creek	Low - runoff flow from Lacey is treated prior to discharge	Flow from city to creek passes through the regional Fones Storm Facility, thus low priority for retrofits
Chambers Lake/Creek	Moderate/Low - most flow is treated, minor potential	Primary discharges pass through existing facilities; long flowpath beyond city; low priority for retrofits
McAllister Creek	Low - no point discharges, UGA between city & creek	Flows from city to creek are primarily dispersed, unconcentrated; thus low priority for retrofits

Appendix C

Lacey Stormwater Facilities

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City of Lacey Stormwater Treatment Facilities

Regional Public Facilities Maintained by Lacey Public Works - Operations Division

No.	Facility ID	Facility Name	Facility Type	Address	Location	Built	Facility Acres	Basin Acres	Primary Discharge to	Downstream Surface Water (watershed)
1	PD0001	Yelm Highway Pond	Constructed Wetland & Infiltration Basin	4500 Yelm Highway SE	Bush Park, Yelm Hwy & Rainier Loop	1991	3.40	110.0	GW	Deschutes River
2	PD0002	Ruddell Road SE Stormwater Facility	Wet Pond & Infiltration Basin	4701 Ruddell Road SE	SE corner of Rainier Vista Park	1991	4.50	114.0	GW	Southwick Lake
3	PD0003	Lakehills Pond	Retention Pond	5280 Lakehills Street SE	S. of Southwick Lake, N. end Lakehills off 54th	1991	0.28	6.0	GW	Southwick Lake
4	PD0004	City Hall Ponds	Retention Ponds & Infiltration Basin/Gallery	420 College Street SE	Within Parking Area of City Hall	1994	0.36	7.2	GW	Woodland Cr
5	PD0005	Westminster Pond	Retention/Detention Pond	4711 8th Ave NE	E. of College Street, S. side of 8th Avenue NE	2000	0.27	34.0	wetlands	College Creek
6	PD0008	Lakecrest Pond	Retention/Detention Pond	2900 Lakeview Dr SE	E. side of Chambers Lake at 29th Ave SE	1978	1.76	18.0	Chambers Lk	Deschutes River
7	PD0010	Mt. Tahoma Pond	Retention Pond	5600 54th Ave SE	N. of 54th, W. of Ruddell, E. of Mt. Tahoma Dr.	1979	2.59	27.0	GW	Deschutes River
8	PD0011	College Street SE	Wet Pond & Infiltration Basin	5300 53rd Ave SE	E. of College St. on S. side of 53rd Ave SE	1991	3.41	51.0	GW	Deschutes River
9	PD0012	Lacey Shop Ponds	Retention/Detention Pond, wet pond, swales	1200 College St SE	City Maintenance Shop	2004	1.00	2.0	GW	Woodland Cr
10	PD0014	Woodland Creek Stormwater Facility	Constructed Wetland & Infiltration Basin	5736 7th Ave SE	N. end of Lacey Street SE	1992	2.10	299.0	GW	Woodland Cr
11	PD0020	Shady Lane Pond	Wet Pond	6401 Shady Lane SE	Shady Lane at Sierra Dr, N. end of Hicks Lake	2000	0.55	12.0	Hicks Lake	Woodland Cr
12	PD0022	Hogum Bay Pond	Wet Pond, to Perforated Pipe	2140 Marvin Rd NE	NE corner of Hogum Bay Rd & Marvin Rd NE	1998	1.10	34.0	GW	Woodland Cr
13	PD0023	Willamette Pond	Wet Pond	2500 Marvin Rd NE	SE cor. Marvin & Willamette, at roundabout	1998	1.00	8.0	GW	Woodland Cr
14	PD0024	Britton Parkway #4 Pond	Wet Ponds	2425 Marvin Rd NE	S. side Britton (within proposed Lacey Town Center)	1998	1.00	41.0	GW	Woodland Cr
15	PD0029	Callison Pond	Infiltration Pond with Infiltration Trenches	7505 Britton Parkway NE	N. side of Britton Pkwy, W. of Callison Rd	1999	0.50	27.0	GW	Eagle Creek
16	PD0032	Britton Parkway #9 Pond	Infiltration Pond with Infiltration Trenches	6300 Britton Parkway NE	Just E. of Carpenter Road	1999	1.91	14.0	GW	Eagle Creek
17	PD0034	7th Avenue Stormwater Facility	Retention Pond	6022 7th Avenue SE	W. of Carpenter Rd near Lake Lois outlet	2001	0.55	36.0	GW	Woodland Cr
18	PD0035	Stockton Pond	Wet Pond & Retention Pond	6100 Stockton St SE	SW corner of Lakepoint Park, Stockton & Compton	1991	0.78	37.0	GW	Deschutes River
19	PD0036	Compton Pond	Wet Pond & Retention Pond	6600 Compton Blvd. SE	E. end of Lakepoint Park , Compton & 60th Ave SE	1991	1.00	37.0	GW	Pattison Lake
20	PD0037	25th Avenue Swales	Series of 6-7 Biofilter Swales	5400-5900 25th Avenue SE	N. side of 25th Ave. from Ruddell Road to Lilac St.	1995	0.33	41.0	GW	Hicks Lake
21	PD0038	Eastwood Estates Ponds	3 Infiltration ponds	7407 38th Dr. SE	Eastwood Estates, W. side Carpenter at 38th Loop	1978	0.01	5.0	GW	Long Lake
22	PD0041	Ruddell & 32nd Facility	Pre-treatment & Wetland Pond enhancement	3411 Ruddell Road SE	E. side of Ruddell to Hicks Lake	1999	4.77	436.0	wetlands	Hicks Lake
23	HICKWTLD	Hicks Lake Wetland (PD0041 Outfall)	Wetlands	3411 Ruddell Road SE	E. side of Ruddell to Hicks Lake	1999	22.52		wetlands	Hicks Lake
24	PD0042	Quail Pond	Wet Pond	4708 Quail Dr. SE	N. side of 45th Avenue SE, E. of Quail Drive	1993	0.71	14.0	GW	Hicks Lake
25	PD0050	Century Court	Retention/Detention Pond	701 Century Court NE	S. end of Century Court, off 15th Ave. NE	1978	2.00	4.0	wetlands	College Creek
26	PD0051	Fones Rd Ditch SW Facility (upper)	Wet Pond & Infiltration Basin	3700 14th Ave SE	E. of Fones Road at 12th Ave SE	2004	2.16	97.0	GW	Woodard Creek
27	PD0052	College Regional Stormwater Facility	Primary Wetpond & Retention Ponds	5100 Abbey Way SE	Saint Martin's University, N. side of Abbey Way	2008	20.00	424.0	GW	College Creek
28	PD0054	Mills Landing	Swale	1330 Carpenter Road SE	E. of NTPS bus lot, N. side Mills Landing Ct. SE	2009	0.64	4.0	wetlands	Woodland Cr
29	PD0055	RAC (Regional Athletic Complex)	Retention Ponds	8245 Steilacoom Road SE	E. side Marvin Rd, NW & SW cor. of baseball fields	2007	1.87	20.0	GW	Little McAllister Cr
30	PD0058	Arbors Pond	Retention Pond	7644 41st Avenue SE	NW corner of 41st Avenue SE & Arbor Drive	1992	0.50	59.0	wetlands	Long Lake
31	ARBWTLAND	Arbors Wetland (PD0058 Outfall)	Wetlands	7616 39th Ave. SE	Arbors Housing Development	1992	12.58		wetlands	Long Lake
32	PD0059	Thornbury Pond	Retention Pond, Oil-Water Separator	5400 Thornbury Drive	SE cor. 54th Ave & Thornbury Dr, E. of Ruddell	1990	0.70	29.0	GW	Southwick Lake
33	PD0060	Lacey Community Center	Pond	6729 Pacific Avenue SE	behind Community & Senior Ctrs, along Goose Lk	2002	0.61	2.2	Long's Pond	Woodland Cr
34	PD0061	Lacey Senior Center	Pond	6757 Pacific Avenue SE	NE end of parking lot	2002	0.01	1.2	GW	Woodland Cr
35	PD0062	Meridian Park	Retention Pond	8855 Campus Glen Dr NE	SE corner of Willamette Dr. & Campus Glen Dr. NE	2006	0.31	1.0	GW	McAllister Creek
36	PD0063	Summerwalk Pond	Retention Pond	4900 Yelm Highway SE	E. of Little Prairie Ctr, in SW part of Summerwalk	2005	0.80	9.0	GW	Deschutes River
37	PD0064	Hawks Prairie Water Treatment Facility	Bioswale and Detention Pond	4040 Marvin Road NE	SE of booster pump station	2009	1.60	2.0	GW/wetlands	Eagle Creek
38	PD0065	Mullen Road Extension	Wet Pond & Infiltration Basin	5400 Mullen Road SE	on both sides of Mullen, near Park Place Loop	2010	0.92	15.0	GW	Hicks Lake
39	PD0067	Yelm Highway East	Retention & Infiltration Basins	6130 Yelm Highway SE	N. side Yelm Hwy, W. of Compton/Balustrade Blvd.	2010	0.36	1.0	GW	Deschutes River
40	PD0068	City Pit (Decant Facility, etc.)	Retention & Infiltration Basin	6245 Martin Way E.	On the left as you enter the gate	2010	0.08	11.0	GW	Woodland Cr
41	PD0069	Chambers Lake Stormwater Facility	Constructed Wetlands	2750 Lakeview Dr. SE	On both sides of walking trail	2015	6.24	187.0	Chambers Lk	Deschutes River
42	PD0070	Rainier Road Swale	Swale	7400 Rainier Rd. SE	East side of Rainier Rd just North of RR Trestle	2009	0.01		Chambers Cr	Deschutes River
43	PD0071	Northridge	Retention Pond	5500 Mullen Rd. SE	S. side of Mullen Rd. between Park Pl. Lp. & Ruddell	1991	0.51	4.4	GW	Southwick Lake
44	PD0072	28th Court NE	Wet Pond	2801 Hogum Bay Rd. NE	On the NW corner of Hogum Bay & 28th Ct. NE	1994	1.00	14.6	GW	Eagle Creek
45	PD0073	Carpenter Road SE	Retention Pond	201 Carpenter Rd. SE	W. side of Carpenter Rd. across from Husky Way	2010	0.27	4.4	GW	Woodland Cr
46	PD0076	Martin Way/Woodland Creek Swale	Wetvaults, Infiltration Swale and Trench	5711 Martin Way E. (approx.)	S. side Martin btw. Desmond Dr. & Woodland Cr	1993	0.25	16.7	GW	Woodland Cr
47	PD0077	Wonderwood Park	Retention Pond	Park entance off Brentwood	On E. side of the parking lot at Brentwood entrance	1978	0.19	54.0	GW	Hicks Lake
48	PD0078	Hidden Forest	Infiltration Pond	Behind 608 Hidden Forest Dr SE	On E. side of Hidden Forest DE SE between 546 & 608	1985			pump system	McAllister Creek
49	PD0079	Hawks Glen	Infiltration Pond	736 Hawks Glen	On the N side of LS58	1981			GW/wetlands	McAllister Creek
50	PD0080	Mullen & Carpenter Roundabout	Infiltration Pond	7530 Mullen Road	NE side of roundabout	2022			GW	Long Lake
51	PD0081	Draham & Carpenter	Infiltration Pond	2031 Draham St NE?	NW corner of Britton Parkway at Carpenter Rd. NE	1999			GW	Woodland Cr
52	PD0082	Pacific Avenue at Woodland Creek	overgrown Detention Pond	6500 Pacific Avenue (approx.)	N. side of Pacific, E. of Woodland Creek	1992	0.3		Lake Lois	Woodland Cr
						Acres	110.31	2370.7		

Appendix D

Building Climate Change Resilience Through Stormwater Management

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Building Climate Change Resilience Through Stormwater Management

Introduction

Climate change poses both immediate and long-term challenges for management of the City of Lacey's (City) stormwater system. Projected increases in annual and extreme temperatures are likely to exacerbate water quality issues, such as low dissolved oxygen and frequent algal blooms in lakes and downstream receiving waters. In addition, higher temperatures can have impacts on vegetation communities and require additional water usage. The City's reliance on groundwater for its water supply underscores the growing importance of stormwater infiltration and groundwater recharge as climate impacts intensify. Additionally, altered precipitation patterns are anticipated to increase flood risks and stress stormwater facilities that were designed for historic conditions. Sea level rise may also affect water quality through saltwater intrusion in drinking water wells.

Climate Change and Stormwater Management

Preparing for and adapting to a changing climate has been a focus for the City. The City has implemented measures to reduce greenhouse gas emissions and has been designated an official "Green Power Community" by the United States Environmental Protection Agency (EPA). The community meets all electrical needs for its utilities through the exclusive use of green power (Lacey 2025). In December of 2025, the City adopted a new comprehensive plan that contains two new sub-elements: Climate Mitigation (Greenhouse Gas Mitigation) and Climate Resilience. Together, these sub-elements detail goals and policies regarding the ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts on natural systems, infrastructure, and communities.

A Climate Vulnerability and Risk Assessment was completed in early 2025 to inform the Climate Resilience sub-element, which identified specific climate hazards and their impacts on the City (Raimi + Associates 2025). The assessment found that, overall, the City's infrastructure has a low level of vulnerability and risk associated with climate change hazards. Only a small portion of infrastructure in the City and the urban growth area are projected to be impacted by climate change. Still, climate change driven events are projected to become more extreme and frequent. The City is looking to adapt to the changes underway, including rising temperatures and shifting precipitation patterns, which can strain infrastructure, ecosystems, and communities.

Evaluating climate impacts now as part of the City's Stormwater Comprehensive Plan (SCP) can support proactive maintenance, operations, and design of best management practices (BMPs) that enhance resilience and align with the City's sustainability and resiliency efforts. In addition, this also aligns with recent Washington Department of Ecology (Ecology) guidance for mitigating climate impacts on

stormwater systems. In Ecology's 2024 update to the Stormwater Management Manual for Western Washington (SWMMWW), Ecology recommends planning and action based on the best available science and tools. Key recommendations include preparing for more extreme events, staying informed on emerging research, increasing awareness of climate-related risks to infrastructure and communities, and considering updates to flow control BMP design requirements (Ecology 2024).

Projected Changes in Climate

Significant research on anticipated climate change has been conducted by the Climate Impacts Group at the University of Washington. This research projects the local effects of global climate change using global climate models and emissions scenarios. Local climate impacts are identified by downscaling model results and supplementing data with regional climate models. The sections below on temperature, precipitation, and sea level rise include updates on the latest and best available science for the area around the City.

Temperature

Warming in the next century is expected to at least double the warming experienced in the twentieth century (Mauger et al. 2015). By the 2050s, average annual temperatures in the Pacific Northwest are forecasted to increase between 4.5°F and 5.4°F, relative to average temperatures for 1950–1999, depending on the intensity of greenhouse gas emissions (Table 1). By the 2080s, average annual temperatures are predicted to be between 5.2°F and 8.7°F higher. Projected increases in summer air temperatures are greater than for other seasons (Mauger et al. 2015).

Warming trends will also intensify heat waves and weaken cold snaps (Mauger et al. 2015). By 2050, the hottest summer days could be 5.6°F warmer (Table 1). In the region, average high temperatures in August could increase to 94 degrees from 88 degrees (Thurston Climate Mitigation Collaborative [TCMC] 2020). By 2080, on average, the hottest summer days could be 8.2°F warmer, while the coolest winter night temperatures are predicted to increase by 4.7°F by 2050 and 6.6°F by 2080 on average (Table 1). Expected temperature changes for these extreme events, which are the events most likely to adversely impact environmental and human health, are large relative to average annual temperature changes (USGCRP 2023).

Table 1. Projected Temperature Change for the Pacific Northwest in the 2050s and 2080s.

Indicator	Scenario	2050s[a]		2080s[a]	
		Average	Range	Average	Range
Average Annual Air Temperature	Low (RCP 4.5)	+ 4.5°F	2.1°F to 6.4°F	+ 5.2°F	2.5°F to 8.5°F
	High (RCP 8.5)	+ 5.4°F	2.9°F to 8.2°F	+ 8.7°F	4.9°F to 12.3°F
Temperature of Hottest Days	Average of RCP 4.5 and 8.5	+ 5.6°F	2.1°F to 9.8°F	+ 8.2°F	2.6°F to 15.5°F
Temperature of Coolest Nights	Average of RCP 4.5 and 8.5	+ 4.7°F	1.8°F to 8.7°F	+ 6.6°F	2.0°F to 12.4°F

Source: Rogers et al. (2021).

RCP = representative concentration pathway

[a] Temperatures are reported relative to the average temperature for 1950 to 1999.

Precipitation

In the Pacific Northwest, year-to-year precipitation can vary greatly. Variation from 15 to 25 percent from one year to the next is typical (Mauger and Vogel 2020). The National Weather Service rain gage station in Olympia shows local average annual precipitation of 50.6 inches for the 30-year period from 1991–2020. The range over this time period is from a low of 34.6 inches in 2001 to a high of 70.9 inches in the 1999. The majority of rainfall occurs during the 3-month period of November–January.

Climate change is expected to amplify these existing precipitation fluctuations, with the greatest changes in the summer months of June to August (Mauger and Vogel 2020). Models for the Puget Sound region predict that summers are likely to see a 27 percent decrease in precipitation, on average, by the 2080s, relative to a historic baseline (1976 to 2005) and a high greenhouse gas emissions scenario (relative concentration pathway [RCP] 8.5) (Mauger and Vogel 2020). This summer drought contrasts with anticipated increases in the frequency and intensity of winter storms.

All rain events are expected to have increases in precipitation volume in the coming decades (Table 2). This is visible when comparing the same event duration and return interval across decades. For example, the 2-year-24-hour storm for the 2030s is projected to be 8 percent larger by volume than the same 2-year storm in the past (average data from 1970 to 1999) (Table 2). This same 2-year-24-hour storm is anticipated to be 22 percent larger by the 2080s. Another observable pattern is that shorter duration events (i.e., 1 hour) are projected to have greater increases in rainfall volume than the longer duration events (i.e., 6 hour and 24 hour). The pattern is even more pronounced for more frequent return intervals: the 2-year-1-hour storm is anticipated to have 17 percent increase in precipitation volume by the 2050s and a 31 percent increase by the 2080s (Table 2). This is in contrast to the 2-year-24-hour storm, which is anticipated to have a 14 and 22 percent increase in the 2050s and 2080s, respectively.

Table 2. Projected Precipitation Change for City of Lacey.

Return Interval	Projected Precipitation Change (%) [a,b]					
	2030s	2040s	2050s	2060s	2070s	2080s
Event Duration of 1 Hour						
2-year	8	12	17	23	27	31
10-year	5	11	16	22	25	33
25-year	2	10	14	20	22	33
100-year	-1	7	10	17	17	32
Event Duration of 6 Hours						
2-year	9	10	15	17	20	24
10-year	7	10	14	15	18	27
25-year	7	10	14	15	17	31
100-year	7	11	14	16	18	39

Table 3 (continued). Projected Precipitation Change for City of Lacey.						
	Projected Precipitation Change (%) [a,b]					
Return Interval	2030s	2040s	2050s	2060s	2070s	2080s
Event Duration of 24 Hours						
2-year	8	9	14	14	19	22
10-year	8	9	13	14	18	24
25-year	8	9	13	15	18	26
100-year	9	11	14	19	18	30

Source: CIG (2021).

[a] Average projected changes in precipitation volumes and for the Weather Research and Forecasting (WRF) grid point at LAT 46.865, LONG -122.795 (Row-Col 68-58) relative to historic data from 1970 to 1999. These percentage changes are based on a high-end greenhouse gas scenario (RCP 8.5) and one additional simulation performed for the low-end RCP 4.5 greenhouse gas scenario, for the ACCESS 1.0 global model. Projected changes are rounded to the nearest one percent.

[b] Decades represent 30 years (e.g., 2030s' represents 2020 to 2049).

Sea Level Rise

Sea level in Puget Sound has been steadily increasing throughout the last century (Figure 1). This rise is driven by warming of the sea surface (warm water takes up more space) and the melting of land-based ice (i.e., glaciers and icesheets). Future sea level rise is anticipated to continue for centuries. While the City of Lacey has little low bank saltwater shore, sea level rise may still be a concern.

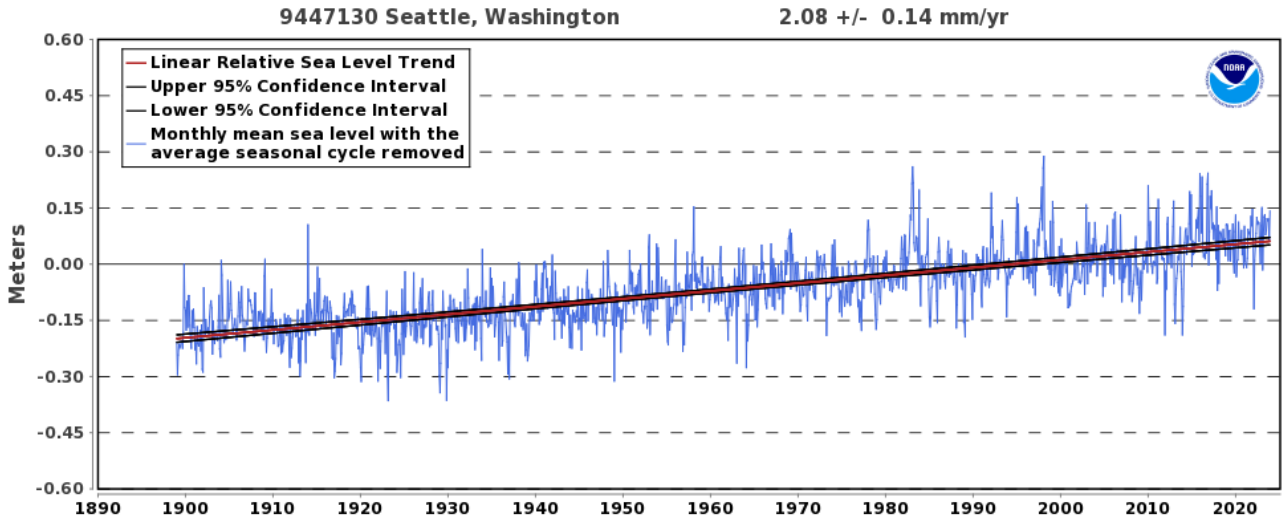


Figure 1. Relative Sea Level Trend for Seattle, Washington.

By 2050, the sea level in the south Puget Sound area is likely to rise an additional 0.7 to 0.8 feet (Table 3), which is more than the sea level rise of the past 100 years. Historic sea level rise at the Seattle tide gage has been about 0.7 foot over the past 100 years (Figure 1). Sea level rise is reported relative to the average sea level between 1991 to 2009, so some of the anticipated rise in the City has already occurred in the past two decades. By 2080, the City may observe sea levels that are 1.3 to 1.6 feet higher (Table 3;

relative to a baseline of 1991 to 2009). Uncertainty about when different thresholds of sea level will be met comes from uncertainty about how quickly global greenhouse gas emissions will be reduced and how likely low-confidence processes (i.e., collapse of ice sheets) are to occur. Continued sea level rise will increase the extent, depth and duration of coastal flooding and accelerate erosion along the shoreline. While no buildings in Lacey are exposed to sea level rise related hazards as of 2025, properties at the water's edge at Hawks Prairie Estate and Beachcrest are exposed to passive flooding and tidal flooding (Lacey 2025). While Lacey's limited coastline minimizes the concerns of sea level rise, impacts such as saltwater intrusion can have significant impacts on biodiversity, water quality, and drinking water wells.

Table 4. Projected Sea Level Rise for the South Puget Sound Area in the 2050s and 2080s.

Decade	2050s						2080s					
Emissions Scenario	Low RCP (4.5)			High RCP (8.5)			Low RCP (4.5)			High RCP (8.5)		
Probability of Exceedance[a]	1%	50%	99%	1%	50%	99%	1%	50%	99%	1%	50%	99%
Sea Level Rise (ft)[b]	1.4	0.7	0.1	1.5	0.8	0.2	3.0	1.3	0.3	3.3	1.6	0.5

Source: CIG (2024b).

RCP = representative concentration pathway

[a] The percentages represent the likelihoods that the projected sea level rise will be met or exceeded by the given year, relative to contemporary sea level (average sea level between 1991 to 2009).

[b] Data presented is for 47.1°, -122.7°, Thurston County, WRIA 11: the Nisqually Watershed.

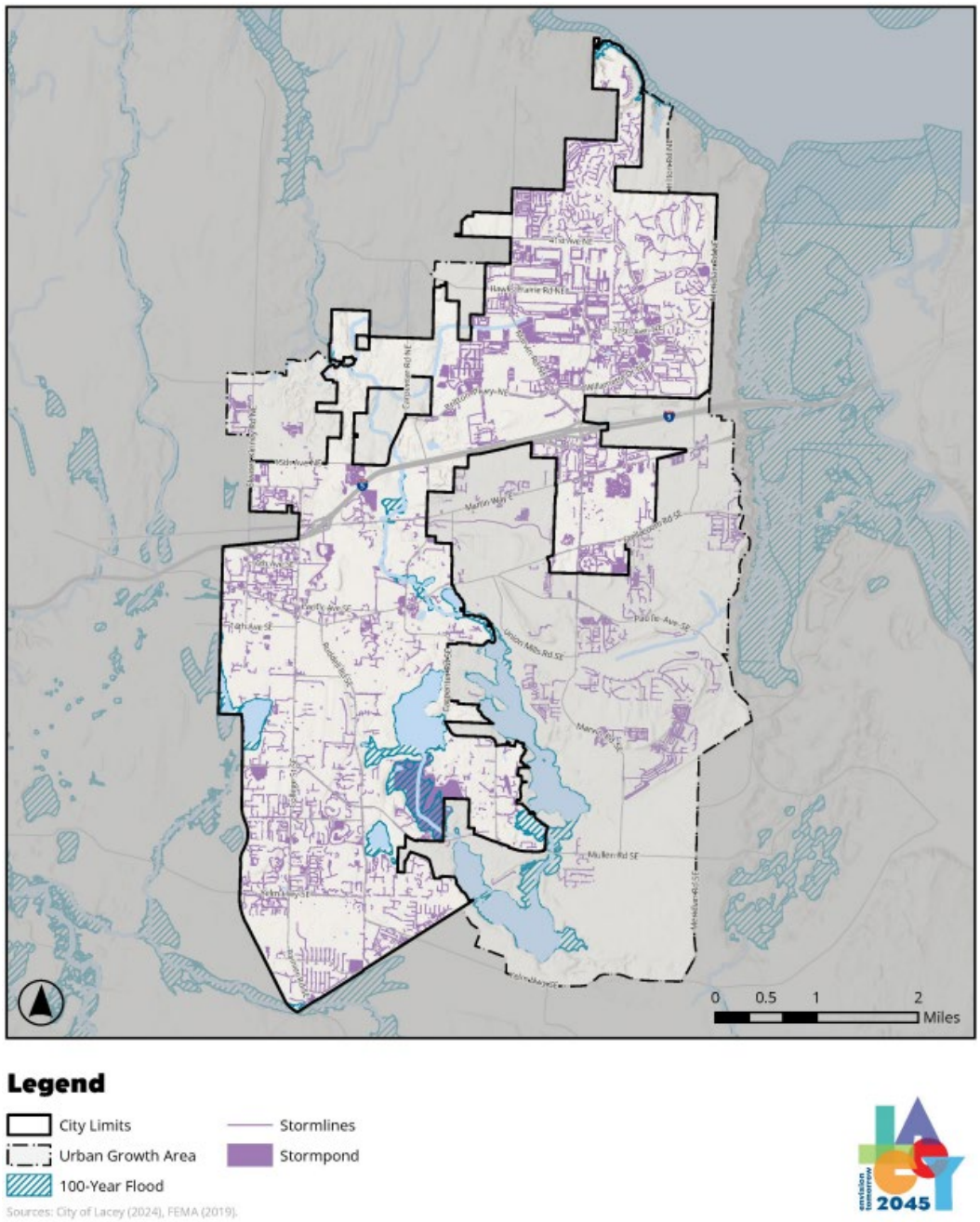
Climate Impacts on Stormwater Infrastructure and Operations

Numerous impacts on stormwater infrastructure and operations are anticipated because of changes in temperature and precipitation patterns (Table 4). As average water temperature increases, it will likely exacerbate existing water quality problems of low dissolved oxygen and frequent algal blooms in the City's lakes and downstream waters. These incidents are already problematic in several local waterbodies such as Pattison Lake, Long Lake, and Woodland Creek, and downstream receiving waters including the Henderson Inlet, the Deschutes River, and Budd Inlet. Current inflows of excessive nutrient loads will produce even more frequent algal blooms leading to higher incidences and longer periods of low dissolved oxygen events. Such effects can also adversely alter stream and lake ecosystems, affecting the viability of many native aquatic plant and animal species, especially cold-water fish such as the native coastal cutthroat trout and other salmonid species. Other lake fish present include bluegill and bass. These changes increase the importance of water quality treatment at new and redevelopment projects, as well as retrofits of the City's existing system.

Changes in rainfall timing and intensity can heighten localized flood risks. Because existing stormwater systems were designed for historic conditions, they may not adequately manage runoff under future scenarios. If older stormwater facilities exceed their design storm capacities or experience debris blockage, this can result in flooding and/or bypass into surface waters. Flood risk potential could be increased in areas near Big Chambers Lake, Hicks Lake, and Southwick Lake. In contrast, less summer rainfall, paired with higher temperatures and increased frequency of heatwaves, is expected to result in more frequent drought conditions. The City's recent climate vulnerability and risk assessment mapped stormwater infrastructure within the 100-year flood zone (Figure 2). Only two facilities were found to be

vulnerable—one facility is within a high groundwater flood area (TRPC 2023), and the stormwater pond south of Hicks Lake is also exposed.

Stormwater systems with vegetation and natural elements (such as ponds, swales, and bioretention) can be vulnerable to droughts, in addition to flooding and pest outbreaks, exacerbated by climate change. If vegetation is overly stressed and in poor health, it may reduce the capacity of stormwater and green stormwater infrastructure (GSI) to provide flow control and water quality treatment.



Source: Raimi + Associates 2025

Figure 2. Stormwater Infrastructure in the 100-Year Flood Zone.

These anticipated changes in precipitation volume, intensity, and timing increase the importance of stormwater management practices that control flows, promote infiltration, and preserve and enhance water quality. Because Lacey's water resources are precipitation driven and the City's water supply is from groundwater, ensuring infiltration of stormwater and groundwater recharge will become increasingly important as population grows, groundwater demands increase (due to higher temperatures and greater population), and water resources become scarcer (due to altered precipitation patterns and higher temperatures).

Table 5. Climate Impacts on Stormwater Infrastructure and Operations.

Climate Driver	Stressors	Impacts on Stormwater Infrastructure and Operations
Increased Temperatures	Water quality and supply from warmer air and water temperatures	• Increased demand for groundwater with warmer temperatures. • Increased importance of facilities that support groundwater recharge with increased evapotranspiration from warmer temperatures • Increased health and safety risk to stormwater maintenance staff working outside on hot days • Decreased water quality when warmer surface water temperatures support harmful algal growth
	Heat island effects	• Increased importance of and need for green infrastructure to reduce urban heat effects • Increased need for healthy forested areas dispersed within urban areas • Increased importance of diverse vegetation communities adapted to current and future conditions
Altered Precipitation Patterns	Flooding from heavier rain events	• Increased stress on the conveyance system, which is designed for lower, historic peak flows • Increased importance of stormwater infrastructure to protect property, infrastructure, and people from flood risk • Facilities designed or retrofitted to manage future climate-perturbed precipitation may need to be larger and more expensive • Capacity challenges for streams and rivers, which can stress stormwater infrastructure such as outfalls that could be damaged by high stream flow • Decreased effectiveness of infiltration facilities when soils are saturated because of larger events • Increased demand on staff time to respond and address flooding issues
	Drought and fire	• Increased vegetation maintenance to support plants in green infrastructure facilities during prolonged dry periods • Decreased function of natural drainage systems if groundwater levels are low • Increased fire risk
	Water quality from sedimentation and pollution	• Increased importance of and need for stormwater infrastructure to reduce flood risk and improve water quality • Increased maintenance needs due to sediment accumulation in stormwater facilities • Degraded water quality from sedimentation, pollutants, and nutrient loading

Table 4 (continued). Climate Impacts on Stormwater Infrastructure and Operations.		
Climate Driver	**Stressors**	**Impacts on Stormwater Infrastructure and Operations**
Rising Sea Level	Water quality from saltwater intrusion	• Decreased drinking water quality • Decreased function of or damage to systems meant to convey water with lower salinity levels
	Erosion	• Increased risk to the structural integrity of stormwater outfalls and other infrastructure if exposed to erosion
	Flooding from higher water levels	• Maintenance challenges where systems may not be maintainable due to submerged structures

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Appendix E

Capital Improvement Program

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Capital Improvement Program

Solution Development

The stormwater capital improvement program (CIP) from the 2020 Stormwater Comprehensive Plan (2020 Plan) was updated using input from City staff on completed projects and new problems. Problems were evaluated using desktop methods and field evaluation to assess site-specific opportunities and constraints. New project concepts were developed using desktop methods and an estimated cost was defined for each project using a combination of parametric and analogous cost estimating techniques.

Conceptual Designs

Sites associated with stormwater problems were visited by Herrera staff to determine the potential cause(s) of the problems. Engineering judgment was then used to identify appropriate capital projects to address each stormwater problem, factoring in constraints and opportunities at each site. For some projects, multiple alternatives were considered.

Conceptual designs were developed for each project, using sound engineering judgement and desktop and field assessment. Each conceptual design includes a project summary sheet (problem description and a list of the primary project components), a plan view figure of the stormwater facilities with dimensions (when applicable), and an itemized planning-level cost estimate (when applicable). Summary sheets and cost estimates are available at the end of this appendix.

Conceptual Cost Estimates

Costs for capital projects were estimated in different ways, depending on the type of project and project development history.

- One project (13-12) was carried forward from the 2013 Plan without major modification. Costs were converted to February 2026 dollars.
- Two projects (13-9 and 13-17) from the 2013 Plan received major updates and new cost estimates were developed using the methodology described below.
- Nine new location-specific (i.e., construction) projects (25-2, 25-3, 25-5, 25-6, 25-9, 25-11, 25-12, 25-13, 25-21) were developed and new cost estimates were developed using the methodology described below.
- Two new projects (25-X1 and 25-X2) were defined that are not location specific (i.e. not construction projects). These projects include annual programs and stormwater planning projects. Costs for these projects were developed based on City experience with the programs in the past and Herrera's experience with similar stormwater planning projects.

Cost estimates were prepared for location-specific (i.e., construction) projects based upon Herrera's experience in designing projects of a similar scale and in similar settings. Unless otherwise noted in the cost estimates, the following assumptions were applied:

- Construction bid items were based on Washington State Department of Transportation (WSDOT standard specifications where applicable, including material, construction requirements, measurement, and payment.
- Line item unit prices used in the construction cost estimates were derived from a combination of applicable sources, including contractor bid tabs from similar past projects, prices compiled by WSDOT, quotes from vendors, a cost estimating guide (The Guide, Winter 2026), site-specific understanding of probable contractor staging, access, and other project-specific requirements and constraints that would affect contractor bids for the project.
- Allied costs (project engineering, construction engineering, and project management) were included for each project, as appropriate.
- The City would manage the project for a cost equal to 10 percent of the construction cost and would perform construction engineering for a cost equal to 25 percent of the construction cost.
- A construction contingency equal to 20 percent of construction cost and an overall project contingency of 30 percent of the total project (construction plus allied costs) were applied to the cost to reflect the level of uncertainty associated with the project scope and potential risks. These values are in line with recommendations by the Association for the Advancement of Cost Engineering (AACE 2005; Rothwell 2005).
- Property acquisition costs were not considered and may affect actual costs for some projects.
- An additional local cost adjustment factor of 10 percent was applied to construction costs to account for higher-than-expected costs for recent projects in the City.

Project Prioritization

The stormwater CIP problems and solutions were prioritized by using Lacey Public Works Department's Project Request and Rating Form. The Project Request and Rating Form includes two steps:

1. Project Request Form: A project requester fills out the Project Request Form and submits it for supervisor approval.
2. Project Scoring Rubric: If the Project Request Form is approved, the supervisor and engineer, with input from the project requester, fill out the Project Scoring Rubric.

The Project Scoring Rubric evaluates Public Works capital projects based on five categories and associated goals:

1. Capacity Impact: Ensure Lacey's utility systems have sufficient/sustainable capacity for existing and future customers

2. **Functional and Reliable Infrastructure:** Ensure Lacey has functional, efficient, infrastructure operating as needed, without excessive maintenance
3. **Public Health/Safety/Regulatory:** Ensure Lacey systems and infrastructure prioritize safety and meet regulatory requirements
4. **Operations and Maintenance Capital and Revenue Impacts:** Ensure Lacey is being a good steward of public funds
5. **Scheduling:** Ensure Lacey is prepared for the future through delivering projects in an efficient and coordinated manner

The supervisor and engineer each provide a score for each category, which are then combined into a total score. A Public Works manager must then approve the completed form.

Crosswalk between Prioritization Categories and Program Elements and Long-Term Goals

The prioritization categories from the Project Request and Rating Form correspond to the program elements and long-term goals for each element of the City's Stormwater Management Program (SWMP). The SWMP program elements and long-term goals are summarized below:

- **Flood Reduction:** There is no flooding of the public stormwater system from the 100-year storm.
- **Surface Water Quality Improvement:** All surface waterbodies in Lacey meet water quality criteria for designated recreation and fish uses.
- **Groundwater Protection and Recharge:** Groundwater quality and quantity is not negatively affected by stormwater practices.
- **Habitat Improvement:** Aquatic species thrive in and along surface waterbodies in Lacey.
- **Public Participation (Education, Outreach, and Involvement):** City residents understand how their actions and choices affect stormwater, and they act in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.
- **Pollutant Source Control:** Pollutants do not enter stormwater, groundwater, or surface waterbodies.
- **Infrastructure Operations and Maintenance:** All stormwater infrastructure operates as intended.
- **Development Practices:** Runoff from developed areas mimics forested hydrology and water quality. Equitable service is provided to applicants for development projects.
- **Stormwater Planning, Administration, and Funding:** Revenue is wisely invested and produces measurable positive outcomes, including regulatory compliance. Utility rates are fair and equitable.

Table 1 summarizes the SWMP program elements and goals that align with Project Request and Rating Form prioritization categories. SWMP program elements and goals that do not correspond to Project Request and Rating Form prioritization categories (i.e., Public Participation [Education, Outreach, and Involvement] and Development Practices) have been excluded from Table 1.

Table 1. Crosswalk between Prioritization Categories and Program Elements and Long-Term Goals.	
SWMP Program Elements and Goals	**Project Request and Rating Form Prioritization Categories**
• **Flood Reduction:** There is no flooding of the public stormwater system from the 100-year storm. • **Surface Water Quality Improvement:** All surface waterbodies in the city meet water quality criteria for designated recreation and fish uses. • **Groundwater Protection and Recharge:** Groundwater quality and quantity is not negatively affected by stormwater practices. • **Pollutant Source Control:** Pollutants do not enter stormwater, groundwater, or surface waterbodies.	• **Capacity Impact:** Ensure Lacey's utility systems have sufficient/sustainable capacity for existing and future customers
• **Infrastructure Operations and Maintenance:** All stormwater infrastructure operates as intended.	• **Functional and Reliable Infrastructure:** Ensure Lacey has functional, efficient, infrastructure operating as needed, without excessive maintenance
• **Flood Reduction:** There is no flooding of the public stormwater system from the 100-year storm. • **Surface Water Quality Improvement:** All surface waterbodies in the city meet water quality criteria for designated recreation and fish uses. • **Groundwater Protection and Recharge:** Groundwater quality and quantity is not negatively affected by stormwater practices. • **Pollutant Source Control:** Pollutants do not enter stormwater, groundwater, or surface waterbodies. • **Habitat Improvement:** Aquatic species thrive in and along surface waterbodies in the city.	• **Public Health/Safety/Regulatory:** Ensure Lacey systems and infrastructure prioritize safety and meet regulatory requirements
• **Infrastructure Operations and Maintenance:** All stormwater infrastructure operates as intended.	• **Operations and Maintenance Capital and Revenue Impacts ($$):** Ensure Lacey is being a good steward of public funds
• **Comprehensive Planning, Administration, and Funding:** Revenue is wisely invested and produces measurable positive outcomes. Utility rates are fair and equitable.	• **Scheduling:** Ensure Lacey is prepared for the future through delivering projects in an efficient and coordinated manner

Results

The results of the prioritization process have been integrated into the Stormwater Capital Improvement Program Implementation Schedule in the main text of the 2026 Stormwater Strategic Plan.

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City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Clearbrook Drainage System**

Project Priority: Medium

Project Number: 13-9

Estimated Cost: $6,100,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The aging storm drain in this area has limited slope and there is no fall between the storm drain outlets and Clearbrook Pond. The existing Clearbrook Pond facility is not performing. There is flooding upstream in the neighborhood. Conveyance to the facility requires maintenance, but infrastructure is located on private property and cannot be accessed.

PROJECT DESCRIPTION

Relocate stormwater conveyance into the right-of-way and abandon inaccessible conveyance on private property. Rehabilitate the function of Clearbrook Pond by digging it deeper and replanting it.

Clearbrook Pond

Existing outfall to Clearbrook Pond

COST ESTIMATE ASSUMPTIONS

Install 3,600 linear feet of new storm pipe and 16 catch basins. Abandon 2,400 linear feet of storm pipe on private property. Excavate 5,000 cubic yards of material from the existing stormwater pond to restore its function. Plant the edges of the stormwater pond with shrubs and trees.

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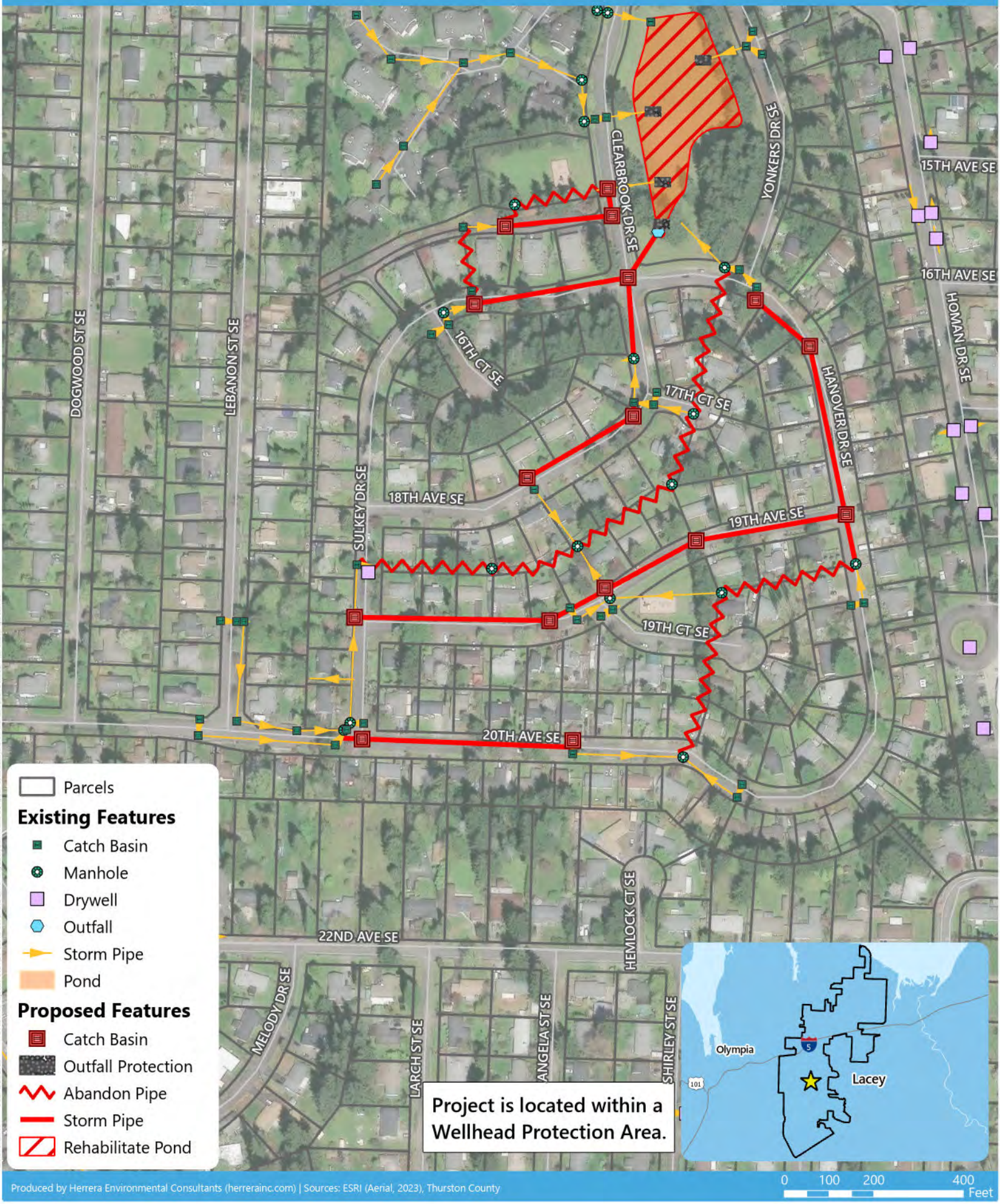
Conceptual Plan.
13-9: Clearbrook Drainage System.



Parcels

Existing Features

- Catch Basin
- Manhole
- Drywell
- Outfall
- Storm Pipe
- Pond

Proposed Features

- Catch Basin
- Outfall Protection
- Abandon Pipe
- Storm Pipe
- Rehabilitate Pond

Project is located within a Wellhead Protection Area.

Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 100 200 400 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Clearbrook Drainage System**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Updated By:	Matt Fontaine
Updated On:	5/11/2026
Verified By:	Julianne Chechanover
Verified On:	5/11/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 141,110
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 141,110
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 70,555
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 28,222
	SP		Temporary Dewatering	1	L.S.	2%	$ 28,222
		Div 2	**Earthwork**				
	0120		Removing Asphalt Conc. Pvmt., Incl. Haul	1,580	S.Y.	$ 20.00	$ 31,600
	1040		Pond Excavation, Incl. Haul	5,000	C.Y.	$ 80.00	$ 400,000
	7345		Abandon Existing Manhole	3	Each	$ 630.00	$ 1,890
	7006		Structure Excavation Class B, Incl. Haul	2,640	C.Y.	$ 20.00	$ 52,800
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	170	Ton	$ 150.00	$ 25,500
	5100		Crushed Surfacing Base Course	740	Ton	$ 150.00	$ 111,000
		Div 5	**Surface Treatments and Pavements**				
	5767		HMA Cl. ½" PG 58H-22	740	Ton	$ 300.00	$ 222,000
	5711		Planing Bituminous Pavement	6,100	S.Y.	$ 10.00	$ 61,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	3542		Schedule A Storm Sewer Pipe 12 In Diam	3,600	L.F.	$ 110.00	$ 396,000
	3109		Catch Basin Type 1 or 2	16	Each	$ 5,000.00	$ 80,000
	7015		Controlled Density Fill	69	C.Y.	$ 300.00	$ 20,700
		Div 8	**Miscellaneous Construction**				
	SP		Planting - Shrubs and Seeding Mix	680	S.Y.	$ 12.00	$ 8,160
	0922		Rock for Erosion and Scour Protection	3	C.Y.	$ 150.00	$ 450
			Construction Subtotal				**$ 1,820,319**
			Construction Contingency	20%			**$ 364,064**
			Lacey Cost Adjustment Factor	10%			**$ 182,032**
			Subtotal				**$ 2,366,415**
			Tax	9.7%			**$ 229,542**
			Construction Total (with Contingency and Tax)				**$ 2,595,957**
			Project Engineering	45%			$ 1,168,181
			Construction Engineering	25%			$ 648,989
			City of Lacey Project Management	10%			$ 259,596
			Project Total				**$ 4,672,722**
			Total Project Contingency	30%			$ 1,401,817
			Total Estimated Project Cost				$ 6,074,539
			Round UP Total Project Cost				**$ 6,100,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Belair-Impala Stormwater Installation**

Project Priority: Medium

Project Number: 13-12

Estimated Cost: $2,800,000
ENR CCI 14131.61 (February 2026)

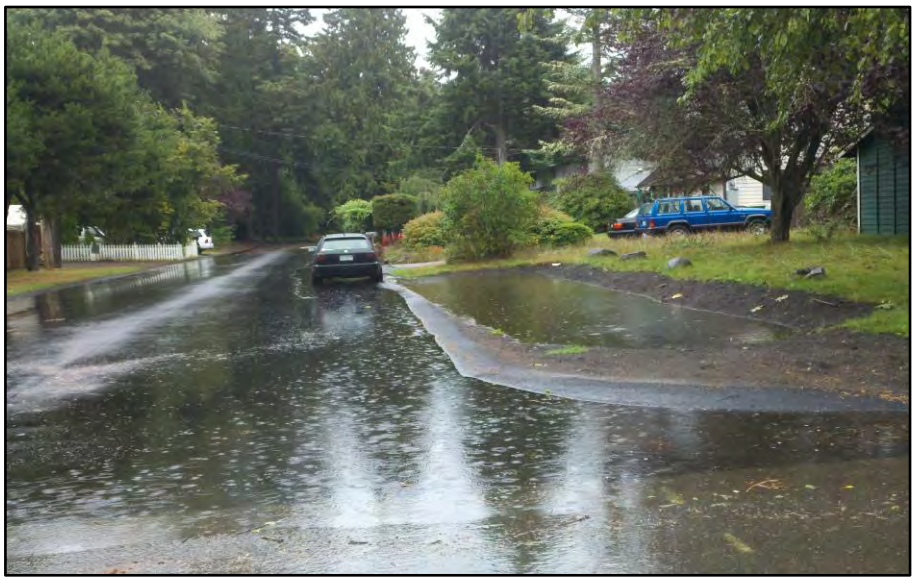
PROBLEM DESCRIPTION

Lack of drainage infrastructure in this area is causing nuisance flooding. All stormwater runoff flows overland towards Wonderwood Park causing chronic flooding on residential streets and in some driveways. Flooding is most significant at the downstream end of the neighborhood.

PROJECT DESCRIPTION

Install storm drain along Impala Dr SE and 32nd Ave SE to convey stormwater to the new drainage system installed as part of the 33rd Ave and Stikes Dr. project. Coordinate the project with other utility upgrades on these streets.

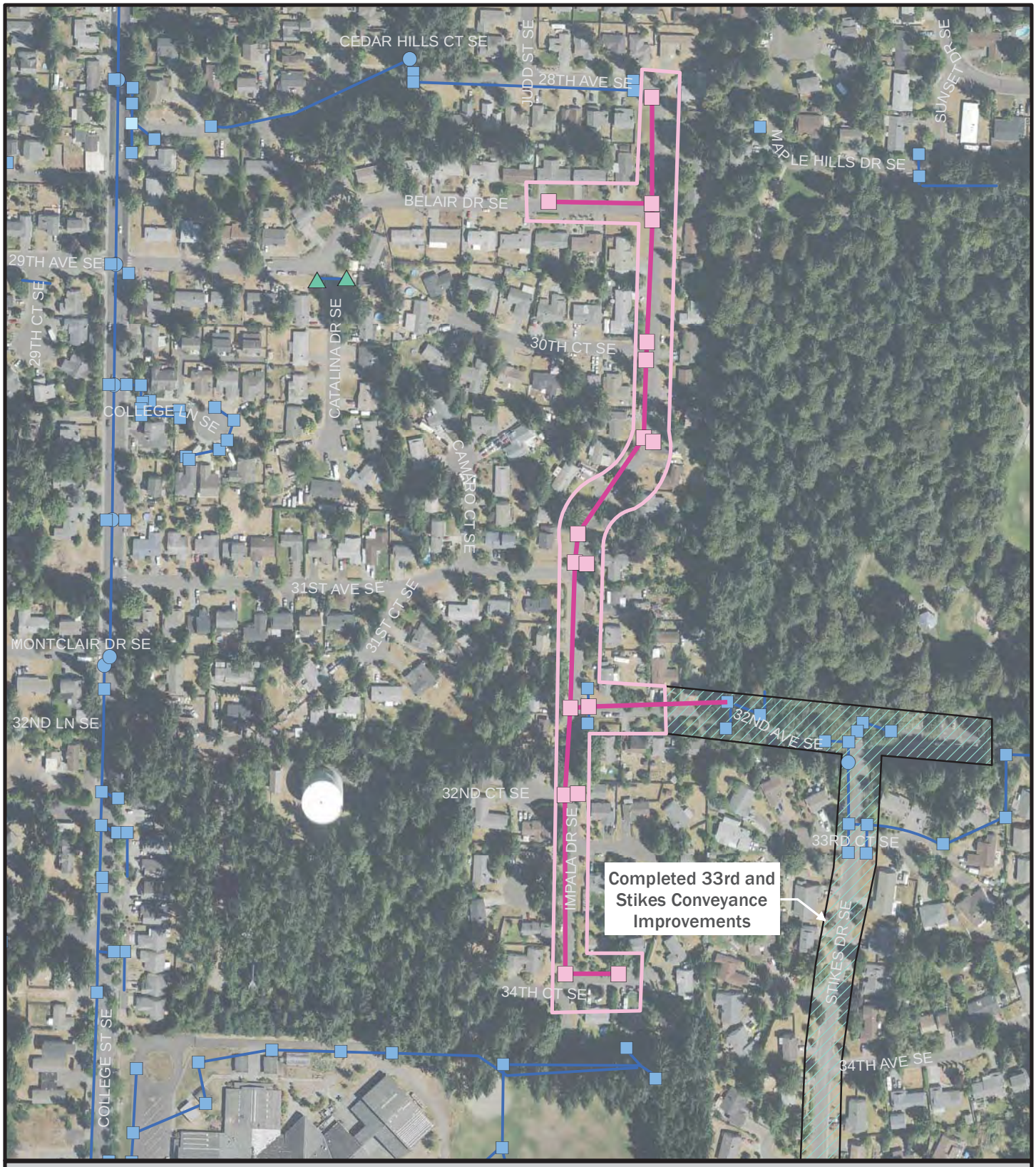
Belair-Impala intersection



Neighborhood flooding

COST ESTIMATE ASSUMPTIONS

Install 2,740 linear feet of new storm pipe and 17 type 1 catch basins. Repair the trench and grind and overlay half the road width. Estimate assumes the stormwater project is conducted independently and there is not cost sharing for roadway restoration.



Legend

Existing	Proposed
Catch Basin	Catch Basin
Discharge	Pipe or Culvert
Junction Box	Project Extent
Manhole	
Conveyance	
Completed CIP	

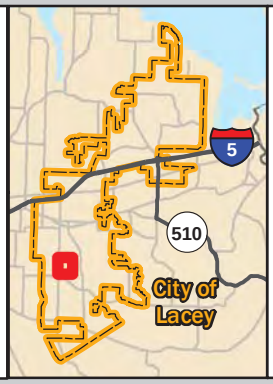


Figure 3. City of Lacey Stormwater CIP 13-12: Belair-Impala Stormwater Installation.

N

0 150 300 600 Feet

HERRERA

City of Lacey Aerial, 2015

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Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Belair-Impala Stormwater Installation**
Project Number: **24-0318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By: Whitney Packard
Last Updated On: 2/25/2026
Reviewed By: Matt Fontaine
Reviewed On: 3/2/2026
Backchecked By: Whitney Packard
Backchecked On: 3/2/2026
Verified By: Matt Fontaine
Verified On: 3/2/2026

Item No.	Spec Division	Item Description	Qty	Unit	Unit Cost	Total Cost
	Div 1	**General Requirements**				
1	0001	Mobilization	1	L.S.	10%	$ 68,480
2	SP	Utility Protection and Relocation	1	L.S.	10%	$ 68,480
3	6971	Project Temporary Traffic Control	1	L.S.	5%	$ 34,240
4	6488	Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 13,696
5	SP	Temporary Dewatering	1	L.S.	2%	$ 13,696
	Div 2	**Earthwork**				
7	7006	Structure Excavation Class B, Incl. Haul	1,290	C.Y.	$ 20	$ 25,800
	Div 4	**Bases**				
8	7014	Gravel Backfill for Drain	180	C.Y.	$ 45	$ 8,100
9	5100	Crushed Surfacing Base Course	270	Ton	$ 150	$ 40,500
	Div 5	**Surface Treatments and Pavements**				
10	5767	HMA Cl. ½" PG 58H-22	640	Ton	$ 300	$ 192,000
11	5711	Planing Bituminous Pavement	4,700	S.Y.	$ 10	$ 47,000
	Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
12	3105	Type 1 Catch Basin	17	Each	$ 4,000	$ 68,000
13	9605	Connect to Drainage Structure	1	Each	$ 2,000	$ 2,000
14	3542	Schedule A SSP, 12 In. Dia.	2,740	L.F.	$ 110	$ 301,400
		Construction Subtotal				**$ 883,392**
		Construction Contingency	20%			**$ 176,678.40**
		Lacey Cost Adjustment Factor	10%			**$ 88,339.20**
		Subtotal (with Contingency and Lacey Cost Adj. Factor)				**$ 1,148,410**
		Tax	9.7%			**$ 111,396**
		Construction Total (with Contingency and Tax)				**$ 1,259,805**
		Project Engineering	35%			**$ 440,932**
		Construction Engineering	25%			**$ 314,951**
		City of Lacey Project Management	10%			**$ 125,981**
		Project Total				**$ 2,141,669**
		Total Project Contingency	30%			**$ 642,501**
		Total Estimated Project Cost				**$ 2,784,170**
		Round UP Total Project Cost				**$ 2,800,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Shady Lane Treatment Facility Improvements**

Project Priority: High

Project Number: 13-17

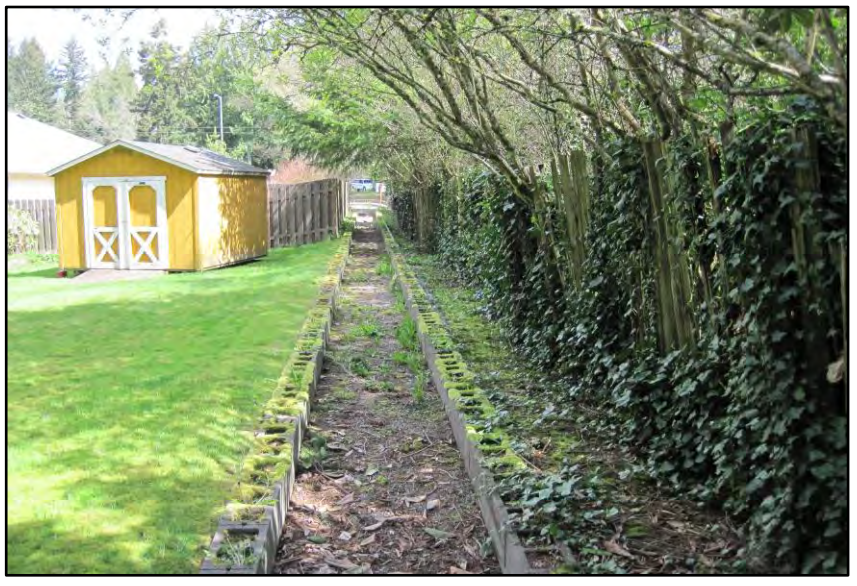
Estimated Cost: $1,600,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

A large amount of sediment has accumulated in the wetpond and needs to be removed. The existing facility is dry and does not hold water. High water levels in Hicks Lake have resulted in backwatering but no flooding. The outlet pipe is buried under the sand in the lake, and there is concern regarding backwatering from the lake extending into the facility.

PROJECT DESCRIPTION

Rehabilitate the existing wetpond by removing sediment and vegetation. Line the facility with a geomembrane to restore the function as a wetpond. Revegetate in accordance with the Lacey Stormwater Design Manual. Reestablish access to the facility. Rebuild the lake outlet. The work on the outfall is expected to require a Joint Aquatic Resources Permit Application.



Outlet from Shady Lane Treatment Facility

Shady Lane Treatment Facility

COST ESTIMATE ASSUMPTIONS

Remove 1,700 cubic yards of sediment from the wetpond, install a geomembrane liner, cover the liner with soil, and plant the edges of the wetpond. Restore access with crushed surfacing.

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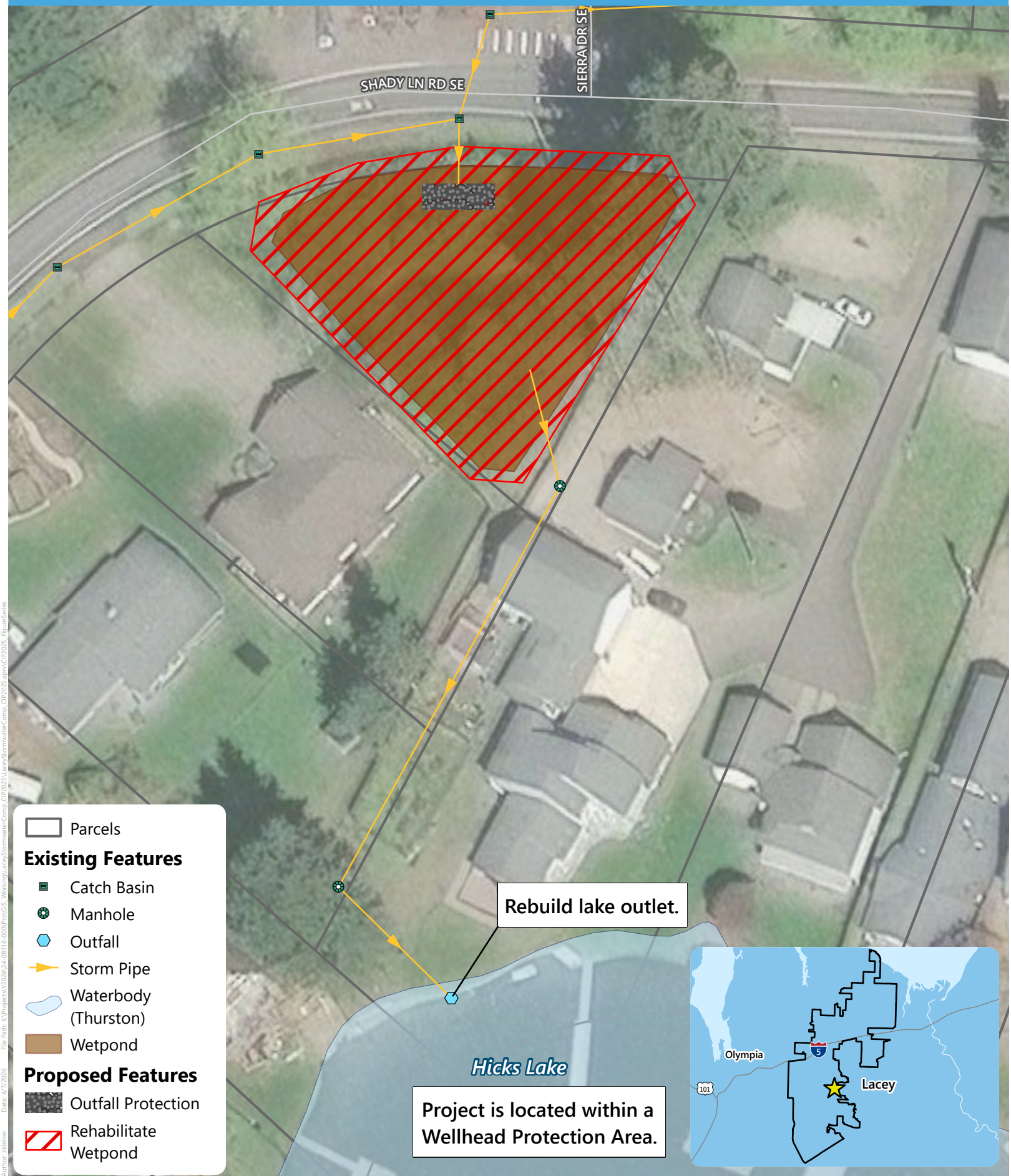
Conceptual Plan.
13-17: Shady Lane Treatment Facility Improvements.



Parcels

Existing Features

- Catch Basin
- Manhole
- Outfall
- Storm Pipe
- Waterbody (Thurston)
- Wetpond

Proposed Features

- Outfall Protection
- Rehabilitate Wetpond

File Path: K:\Projects\Y2024\24-08318-000\ProvGIS_Working\LaceyStormwaterComp_CIP2025\LaceyStormwaterComp_CIP2025.aprx\CIP2025_FigureSeries
Date: 4/7/2026
Author: zleiner

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Shady Lane Treatment Facility Improvements**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	1/4/2026
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Comments Addressed By:	Matt Fontaine
Addressed On:	4/6/2026
Verified By:	Whitney Packard
Verified On:	4/6/2026
Comments Addressed By:	Julianne Chechanover
Addressed On:	4/9/2026
Verified By:	Whitney Packard
Verified On:	4/9/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 34,162
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 34,162
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 17,081
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 6,832
	SP		Temporary Dewatering	1	L.S.	10%	$ 34,162
		Div 2	**Earthwork**				
	1040		Pond Excavation, Incl. Haul	1,670	C.Y.	$ 80.00	$ 133,600
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	50	Ton	$ 150.00	$ 7,500
		Div 8	**Miscellaneous Construction**				
	SP		Planting - Shrubs and Seeding Mix	590	S.Y.	$ 12.00	$ 7,080
	0922		Rock for Erosion and Scour Protection	20	C.Y.	$ 150.00	$ 3,000
	SP		30-mil LLDPE Geomembrane	1,430	S.Y.	$ 24.00	$ 34,320
	6455		Erosion Control Blanket	1,430	S.Y.	$ 4.00	$ 5,720
	6391		Topsoil Type A	720	C.Y.	$ 70.00	$ 50,400
	SP		Rebuild Lake Outlet	1	L.S.	$ 100,000	$ 100,000
			Construction Subtotal				**$ 468,019**
			Construction Contingency	20%			**$ 93,604**
			Lacey Cost Adjustment Factor	10%			**$ 46,802**
			Subtotal				**$ 608,425**
			Tax	9.7%			**$ 59,017**
			Construction Total (with Contingency and Tax)				**$ 667,442**
			Project Engineering	45%			$ 300,349
			Construction Engineering	25%			$ 166,861
			City of Lacey Project Management	10%			$ 66,744
			Project Total				**$ 1,201,396**
			Total Project Contingency	30%			$ 360,419
			Total Estimated Project Cost				$ 1,561,815
			Round UP Total Project Cost				**$ 1,600,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Ruddell & 32nd Facility Retrofit**

Project Priority: High

Project Number: 25-2

Estimated Cost: $12,000,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The facility's sediment storage has become full. In addition to maintenance, this older constructed wetland is receiving more flows than it was initially designed for so it is now undersized. The additional flow is causing erosion of adjacent private property. Access improvements are needed because the pathways have become overgrown over time.

PROJECT DESCRIPTION

Excavate accumulated sediment from the presettling pond and restore maintenance access by adding vactor truck access points to the facility. Expand the facility to provide water quality treatment for the tributary drainage basin. Develop a long term maintenance plan that addresses repair of any future erosion around the facility. Expanding the facility is expected to require a Joint Aquatic Resources Permit Application and may require mitigation.

Ruddell & 32nd Facility access road

Ruddell & 32nd Facility weir and wetland

COST ESTIMATE ASSUMPTIONS

Work should begin with an alternatives analysis to identify a preferred solution for expanding the facility. For budgeting purposes, this estimate assumes the project would restore approximately 500 linear feet of access road, remove 1,400 cubic yards of sediment from the wetpond, restore the wetpond, and expand the wetland cell by approximately 4 acres.

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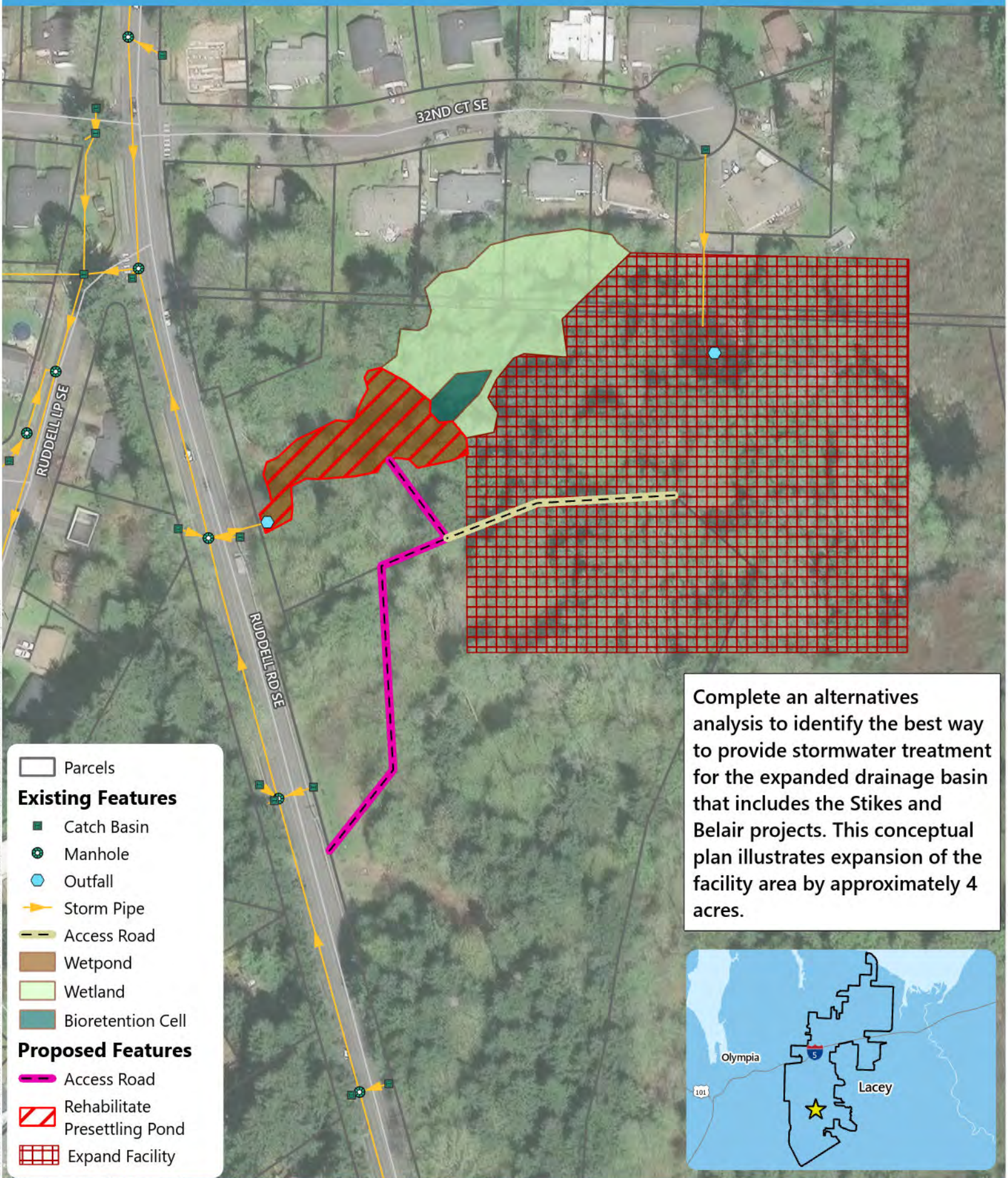
Conceptual Plan.
25-2: Ruddell & 32nd Facility Retrofit.



Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 45 90 180 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Ruddell & 32nd Facility Retrofit**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Comments Addressed By:	Matt Fontaine
Addressed On:	4/6/2026
Verified By:	Whitney Packard
Verified On:	4/6/2026
Comments Addressed By:	Julianne Chechanover
Addressed On:	4/9/2026
Verified By:	Whitney Packard
Verified On:	4/9/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 259,790
	SP		Utility Protection and Relocation	1	L.S.	2%	$ 51,958
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 129,895
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	10%	$ 259,790
	SP		Temporary Dewatering	1	L.S.	10%	$ 259,790
		Div 2	**Earthwork**				
	1040		Pond Excavation, Incl. Haul	1,400	C.Y.	$ 80.00	$ 112,000
	0025		Clearing and Grubbing (Access Road)	0.050	Acre	$ 10,000.00	$ 500
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	140	Ton	$ 150.00	$ 21,000
	0431		Gravel Borrow	640	Ton	$ 25.00	$ 16,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	SP		30-mil LLDPE Geomembrane	1,400	S.Y.	$ 24.00	$ 33,600
		Div 8	**Miscellaneous Construction**				
	SP		Planting -- Shrubs and Seeding Mix	300	S.Y.	$ 12.00	$ 3,600
	6391		Topsoil Type A	160	C.Y.	$ 70.00	$ 11,200
	SP		Rebuild and Expand Treatment Wetland Cell	4	Acre	$ 600,000.00	$ 2,400,000
			Construction Subtotal				**$ 3,559,123**
			Construction Contingency	20%			$ 711,825
			Lacey Cost Adjustment Factor	10%			$ 355,912
			Subtotal				**$ 4,626,860**
			Tax	9.7%			$ 448,805
			Construction Total (with Contingency and Tax)				**$ 5,075,665**
			Project Engineering	45%			$ 2,284,049
			Construction Engineering	25%			$ 1,268,916
			City of Lacey Project Management	10%			$ 507,567
			Project Total				**$ 9,136,198**
			Total Project Contingency	30%			$ 2,740,859
			Total Estimated Project Cost				$ 11,877,057
			Round UP Total Project Cost				**$ 12,000,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **28th Court NE Pond Rehabilitation**

Project Priority: Medium

Project Number: 25-3

Estimated Cost: $1,200,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The facility is intended to be a wetpond that discharges to an infiltration facility. Currently, the water discharged to the infiltration facility is not sufficiently treated.
There have been several traffic incidents upstream of this facility that have caused fuel spills.

PROJECT DESCRIPTION

Line the facility with a geomembrane to restore the function as a wetpond. Add an oil-water separator upstream of the wetpond, replace outfall protection to prevent erosion, and restore the perimeter with planting to match the area aesthetic, provide a visual buffer, and reduce heat island effects.

28th Court NE Pond

28th Court NE Pond inlet existing outfall protection

COST ESTIMATE ASSUMPTIONS

Remove 1,300 cubic yards of sediment from the wetpond, install a geomembrane liner, cover the liner with soil, and plant the edges of the wetpond. Install an oil water separator upstream of the wetpond.

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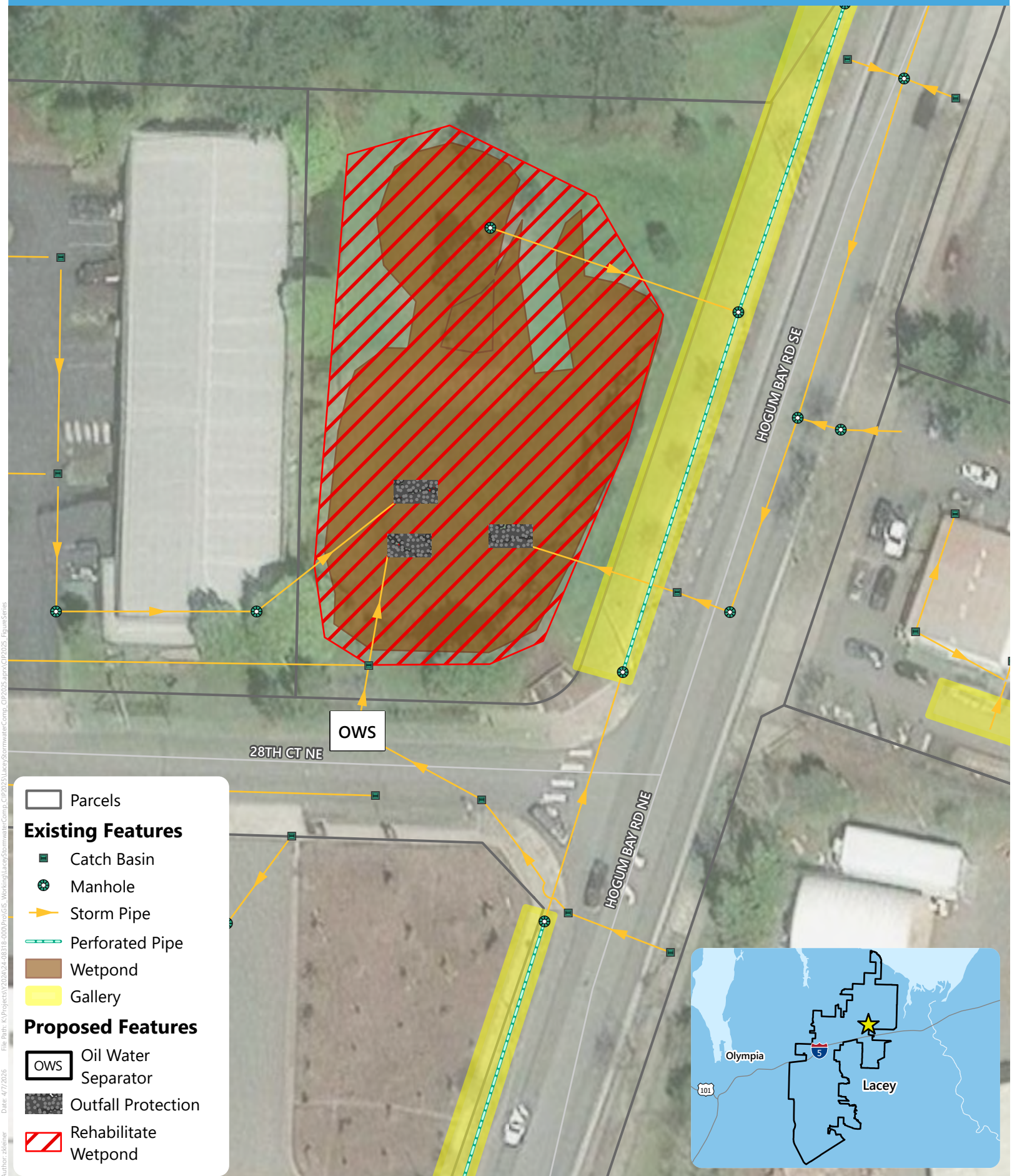
Conceptual Plan.
25-3: 28th Court NE Pond Rehabilitation.



Parcels

Existing Features

- Catch Basin
- Manhole
- Storm Pipe
- Perforated Pipe
- Wetpond
- Gallery

Proposed Features

- OWS — Oil Water Separator
- Outfall Protection
- Rehabilitate Wetpond

Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 15 30 60 Feet

File Path: K:\Projects\Y2024\24-08318-000\ProvGIS_Working\LaceyStormwaterComp_CIP2025\LaceyStormwaterComp_CIP2025.aprx\CIP2025_FigureSeries
Date: 4/7/2026
Author: zkleiner

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **28th Court NE Pond Rehabilitation**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 26,793
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 26,793
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 13,397
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 5,359
	SP		Temporary Dewatering	1	L.S.	10%	$ 26,793
		Div 2	**Earthwork**				
	1040		Pond Excavation, Incl. Haul	1,400	C.Y.	$ 80.00	$ 112,000
	7006		Structure Excavation Class B, Incl. Haul	38	C.Y.	$ 20.00	$ 760
		Div 6	**Structures**				
			Oil Water Separator	1	Each	$ 20,000.00	$ 20,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	0049		Drainage Structure Removal	1	Each	$ 2,000.00	$ 2,000
		Div 8	**Miscellaneous Construction**				
	SP		Planting - Shrubs and Seeding Mix	310	S.Y.	$ 12.00	$ 3,720
	0922		Rock for Erosion and Scour Protection	23	C.Y.	$ 150.00	$ 3,450
	SP		30-mil LLDPE Geomembrane	2,000	S.Y.	$ 24.00	$ 48,000
	6455		Erosion Control Blanket	2,000	S.Y.	$ 4.00	$ 8,000
	6391		Topsoil Type A	1,000	C.Y.	$ 70.00	$ 70,000
			Construction Subtotal				**$ 367,064**
			Construction Contingency	20%			**$ 73,413**
			Lacey Cost Adjustment Factor	10%			**$ 36,706**
			Subtotal				**$ 477,183**
			Tax	9.7%			**$ 46,287**
			Construction Total (with Contingency and Tax)				**$ 523,470**
			Project Engineering	35%			$ 183,215
			Construction Engineering	25%			$ 130,868
			City of Lacey Project Management	10%			$ 52,347
			Project Total				**$ 889,899**
			Total Project Contingency	30%			$ 266,970
			Total Estimated Project Cost				$ 1,156,869
			Round UP Total Project Cost				**$ 1,200,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Hawks Ridge Neighborhood Drywell Repair**

Project Priority: High

Project Number: 25-5

Estimated Cost: $4,200,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

There are 22 mapped drywells that consist of pieces of pipe with a grate on top. In addition to being below standards, flooding has been reported in this neighborhood. Structures are in odd locations and some create hazards for pedestrians.

PROJECT DESCRIPTION

Replace existing drywells with pretreatment BMPs and infiltration systems. In order to route stormwater through the pretreatment BMPs, some drywells will be replaced with catch basins and additional conveyance will be added. Upgrade pedestrian ramps and sidewalks in the work area to meet current standards.

Hawks Ridge neighborhood drywell structure

Hawks Ridge neighborhood drywell location below sidewalk

COST ESTIMATE ASSUMPTIONS

Install 5 new infiltration systems, 5 pretreatment units, 22 catch basins, 2 flow separators, 1,550 linear feet of storm pipe, 10 new pedestrian ramps, and sidewalk and roadway restoration.

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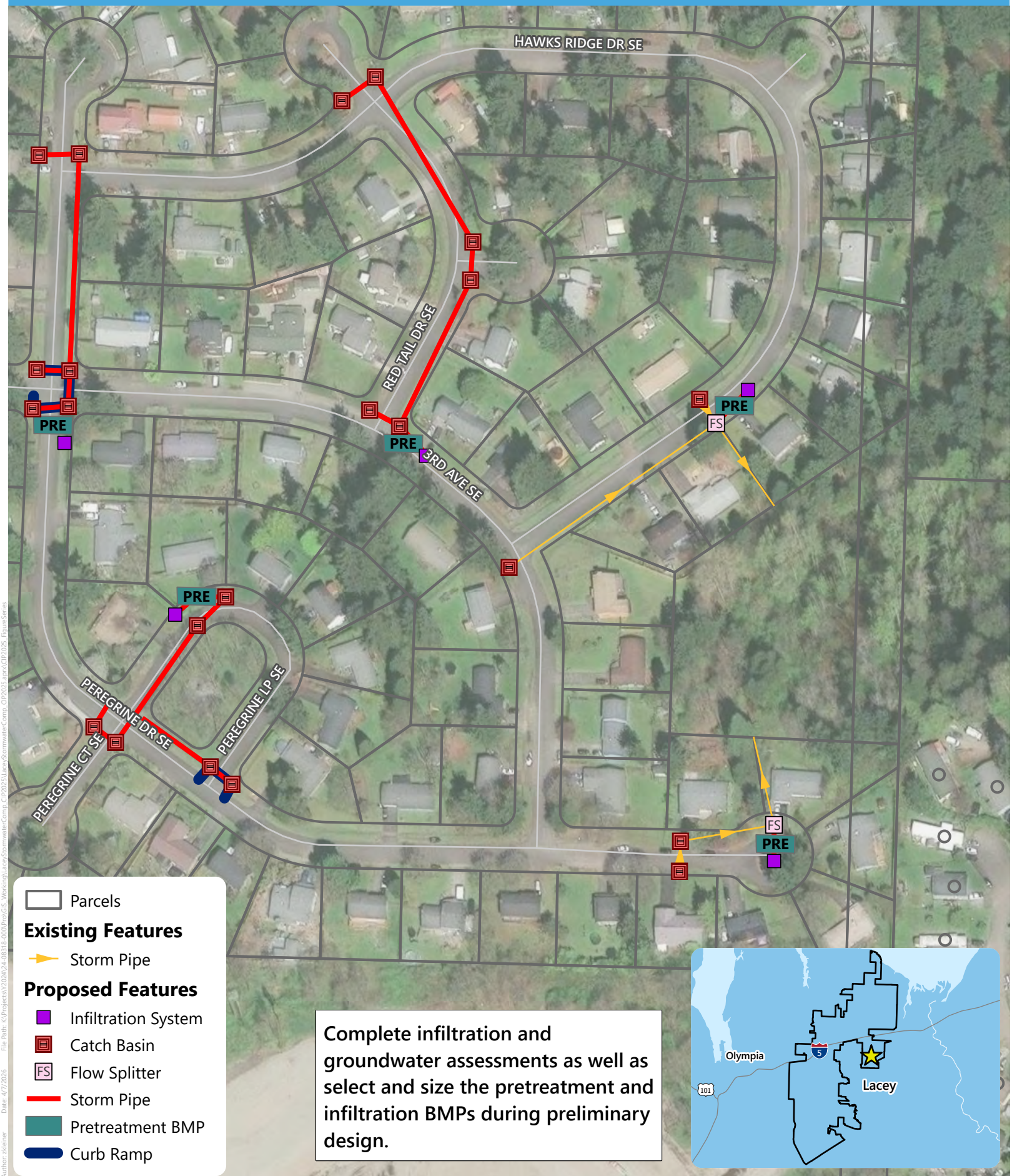
Science + Planning + Design

Conceptual Plan.
25-5: Hawks Ridge Neighborhood Drywell Repair.



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Date: 4/7/2026
Author: zkleiner

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Hawks Ridge Neighborhood Drywell Repair**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Comments Addressed By:	Matt Fontaine
Addressed On:	4/6/2026
Verified By:	Whitney Packard
Verified On:	4/6/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 102,090
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 102,090
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 51,045
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 20,418
	SP		Temporary Dewatering	1	L.S.	1%	$ 10,209
		Div 2	**Earthwork**				
	7006		Structure Excavation Class B, Incl. Haul	1,550	C.Y.	$ 20.00	$ 31,000
	7008		Shoring or Extra Excavation Class B	10,000	S.F.	$ 1.00	$ 10,000
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	96	Ton	$ 150.00	$ 14,400
	5100		Crushed Surfacing Base Course	430	Ton	$ 150.00	$ 64,500
		Div 5	**Surface Treatments and Pavements**				
	5767		HMA Cl. ½" PG 58H-22	460	Ton	$ 300.00	$ 138,000
	5711		Planing Bituminous Pavement	4,000	S.Y.	$ 10.00	$ 40,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	0049		Drywell Structure Removal	22	Each	$ 2,000.00	$ 44,000
	SP		Infiltration System	5	Each	$ 40,000.00	$ 200,000
	3105		Type 1 Catch Basin	24	Each	$ 4,000.00	$ 96,000
	3542		Schedule A Storm Sewer Pipe 12 in Diam	2,100	L.F.	$ 110.00	$ 231,000
	SP		GULD Pretreatment Device	5	Each	$ 20,000.00	$ 100,000
	SP		Flow Splitter Structure 54 in Diam	2	Each	$ 11,000.00	$ 22,000
		Div 8	**Miscellaneous Construction**				
	7058		Curb Ramp	6	Each	$ 5,000.00	$ 30,000
			Construction Subtotal				**$ 1,306,752**
			Construction Contingency	20%			**$ 261,350**
			Lacey Cost Adjustment Factor	10%			**$ 130,675**
			Subtotal				**$ 1,698,778**
			Tax	9.7%			**$ 164,781**
			Construction Total (with Contingency and Tax)				**$ 1,863,559**
			Project Engineering	35%			$ 652,246
			Construction Engineering	25%			$ 465,890
			City of Lacey Project Management	10%			$ 186,356
			Project Total				**$ 3,168,050**
			Total Project Contingency	30%			$ 950,415
			Total Estimated Project Cost				$ 4,118,465
			Round UP Total Project Cost				**$ 4,200,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Wedgewood Manor – Clearwater Court Flood Reduction**

Project Priority: Medium

Project Number: 25-6

Estimated Cost: $360,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

Private property is flooding and the existing facility is difficult to access. A catch basin collects runoff from the road and discharges to an existing swale and easement, but the amount of stormwater exceeds the capacity of the existing system. Space is a constraint for maintenance access and construction at the site, which also includes large trees.

PROJECT DESCRIPTION

Replace the existing system with a pretreatment BMP and infiltration gallery. Improve maintenance access by installing structures in the infiltration gallery that are accessible to the vactor truck from Carpenter Road SE. There is an existing drainage easement. Adjust the facility size and siting during design to maximize performance and maintenance access and minimize impacts to property and trees.

Wedgewood Manor - Clearwood Court mainline pipe outlet

Wedgewood Manor - Clearwood Court Flooding

COST ESTIMATE ASSUMPTIONS

Install a new pretreatment BMP, 80 linear feet of infiltration gallery, and 3 catch basins. Restore the site including the fence.

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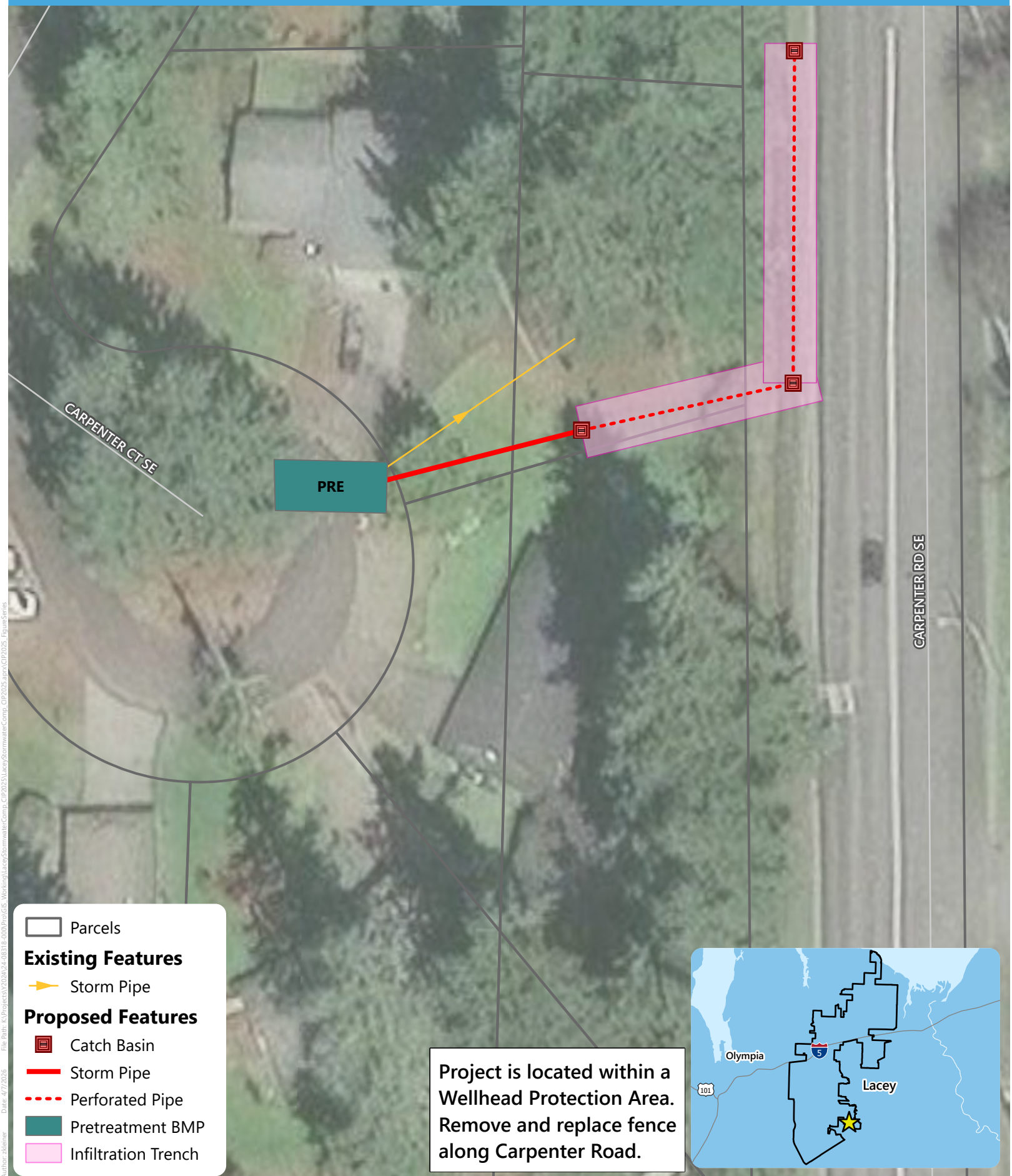
Science + Planning + Design

Conceptual Plan.
25-6: Wedgewood Manor – Clearwater Court Flood Reduction.



Parcels

Existing Features

Storm Pipe

Proposed Features

Catch Basin
Storm Pipe
Perforated Pipe
Pretreatment BMP
Infiltration Trench

Project is located within a Wellhead Protection Area. Remove and replace fence along Carpenter Road.

File Path: K:\Projects\Y2024\24-08318-000\ProvGIS_Working\LaceyStormwaterComp_CIP2025\LaceyStormwaterComp_CIP2025.aprx\CIP2025_FigureSeries
Date: 4/7/2026
Author: zleiner

Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 10 20 40 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Wedgewood Manor – Clearwater Court Flood Reduction**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Comments Addressed By:	Whitney Packard
Addressed On:	4/2/2026
Verified By:	Matt Fontaine
Verified On:	4/6/2026
Comments Addressed By:	Julianne Chechanover
Addressed On:	4/9/2026
Verified By:	Whitney Packard
Verified On:	4/9/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 8,464
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 8,464
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 4,232
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 1,693
	SP		Temporary Dewatering	1	L.S.	0%	$ -
		Div 2	**Earthwork**				
	7006		Structure Excavation Class B, Incl. Haul	60	C.Y.	$ 20.00	$ 1,200
		Div 6	**Structures**				
	SP		Pretreatment BMP	1	Each	$ 20,000.00	$ 20,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	3542		Schedule A Storm Sewer Pipe 12 in Diam	80	L.F.	$ 110.00	$ 8,800
	3018		Underdrain Pipe 24 in Diam	80	L.F.	$ 200.00	$ 16,000
	3543		Catch Basin Type 2 48 in	3	Each	$ 6,000.00	$ 18,000
		Div 8	**Miscellaneous Construction**				
	6391		Topsoil Type A	3	C.Y.	$ 70.00	$ 210
	7014		Gravel Backfill for Drain	50	C.Y.	$ 45.00	$ 2,250
	0100		Removing Cement Conc. Sidewalk	90	S.Y.	$ 37.00	$ 3,330
	7055		Cement Conc. Sidewalk	90	S.Y.	$ 65.00	$ 5,850
	SP		Remove and Replace Fence	90	L.F.	$ 100.00	$ 9,000
			Construction Subtotal				**$ 107,493**
			Construction Contingency	20%			**$ 21,499**
			Lacey Cost Adjustment Factor	10%			**$ 10,749**
			Subtotal				**$ 139,741**
			Tax	9.7%			**$ 13,555**
			Construction Total (with Contingency and Tax)				**$ 153,295**
			Project Engineering	45%			$ 68,983
			Construction Engineering	25%			$ 38,324
			City of Lacey Project Management	10%			$ 15,330
			Project Total				**$ 275,932**
			Total Project Contingency	30%			$ 82,780
			Total Estimated Project Cost				$ 358,712
			Round UP Total Project Cost				**$ 360,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Lacey Street Stormwater Improvements**

Project Priority: Medium

Project Number: 25-9

Estimated Cost: $4,500,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

Flooding occurs along Lacey St SW between the Pacific Ave SE roundabout and 7th Ave SE. The current conveyance system is undersized for the amount of flow it receives. This section of the stormwater system has very few inlets to allow surface runoff into the system. Overland flow crosses Lacey St SW flowing from west to east and floods private yards and driveways. The total tributary area to the downstream Woodland Creek Stormwater Facility Basin is about 300 acres.

PROJECT DESCRIPTION

Determine design flow rates and pipe capacity using flow monitoring and/or hydrologic and hydraulic modeling. Replace the storm pipe along Lacey Street between Pacific Ave SE and 7th Ave SE to the extent needed to convey the design storm and restore the system.

Lacey Street flooding

Lacey Street driveway of concern

COST ESTIMATE ASSUMPTIONS

Install 2,300 linear feet of new storm pipe and 24 catch basins. Assumes the storm main would be in the center of the road with lateral catch basins on each side of the street spaced approximately 300 linear feet apart. Repair the trench and grind and overlay half the road width. Assumes all new pipes and structures between Pacific Ave SE and the outfall.

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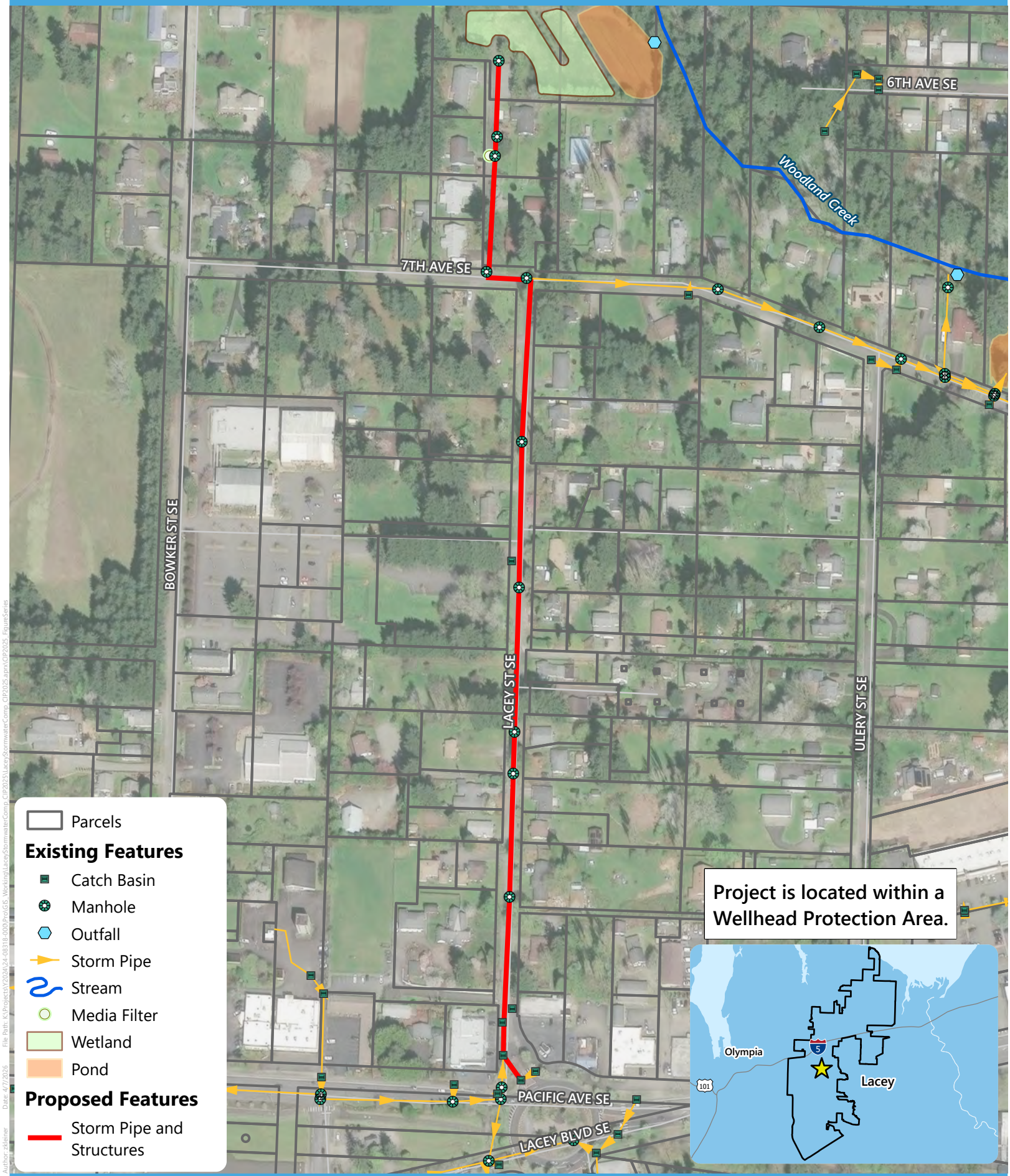
Conceptual Plan.
25-9: Lacey Street Stormwater Improvements.



Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 90 180 360 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Lacey Street Stormwater Improvements**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026
Comments Addressed By:	Matt Fontaine
Addressed On:	4/6/2026
Verified By:	Whitney Packard
Verified On:	4/6/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 109,350
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 109,350
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 54,675
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 21,870
	SP		Temporary Dewatering	1	L.S.	1%	$ 10,935
		Div 2	**Earthwork**				
	7006		Structure Excavation Class B, Incl. Haul	3,100	C.Y.	$ 20.00	$ 62,000
	7008		Shoring or Extra Excavation Class B	14,000	S.F.	$ 1.00	$ 14,000
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	160	Ton	$ 150.00	$ 24,000
	5100		Crushed Surfacing Base Course	710	Ton	$ 150.00	$ 106,500
		Div 5	**Surface Treatments and Pavements**				
	5767		HMA Cl. ½" PG 58H-22	440	Ton	$ 300.00	$ 132,000
	5711		Planing Bituminous Pavement	2,600	S.Y.	$ 10.00	$ 26,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	3105		Catch Basin Type 2 60 In Dia	8	Each	$ 10,000.00	$ 80,000
	3091		Catch Basin Type 1	16	Each	$ 4,000.00	$ 64,000
	3553		Schedule A Storm Sewer Pipe 30 in Diam	2,300	L.F.	$ 250.00	$ 575,000
		Div 8	**Miscellaneous Construction**				
	SP		Misc Restoration	1	L.S.	$ 10,000.00	$ 10,000
			Construction Subtotal				**$ 1,399,680**
			Construction Contingency	20%			**$ 279,936**
			Lacey Cost Adjustment Factor	10%			**$ 139,968**
			Subtotal				**$ 1,819,584**
			Tax	9.7%			**$ 176,500**
			Construction Total (with Contingency and Tax)				**$ 1,996,084**
			Project Engineering	35%			$ 698,629
			Construction Engineering	25%			$ 499,021
			City of Lacey Project Management	10%			$ 199,608
			Project Total				**$ 3,393,342**
			Total Project Contingency	30%			$ 1,018,003
			Total Estimated Project Cost				$ 4,411,345
			Round UP Total Project Cost				**$ 4,500,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Pattison Lake Drive SE Drainage Improvements**

Project Priority: Medium

Project Number: 25-11

Estimated Cost: $160,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

Stormwater from Pattison Lake Drive SE flows into a driveway and causes erosion. The driveway is at a low point in the road and receives runoff from the north and south.

PROJECT DESCRIPTION

Install three new catch basins and new perforated pipe to manage the stormwater.

Pattison Lake Drive SE driveway trench drain filled with sediment

Pattison Lake Drive SE driveway of concern

COST ESTIMATE ASSUMPTIONS

Install 120 linear feet of perforated pipe and 3 type 1 catch basins.

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Conceptual Plan.
25-11: Pattison Lake Drive SE Drainage Improvements.

Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 20 40 80 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Pattison Lake Drive SE Drainage Improvements**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Checked By:	Matt Fontaine
Checked On:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 3,858
	SP		Utility Protection and Relocation	1	L.S.	10%	$ 3,858
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 1,929
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	2%	$ 772
	SP		Temporary Dewatering	1	L.S.	0%	$ -
		Div 2	**Earthwork**				
	7006		Structure Excavation Class B, Incl. Haul	90	C.Y.	$ 20.00	$ 1,800
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	6	Ton	$ 150.00	$ 825
	5100		Crushed Surfacing Base Course	25	Ton	$ 150.00	$ 3,705
		Div 5	**Surface Treatments and Pavements**				
	5767		HMA Cl. ½" PG 58H-22	13	Ton	$ 300.00	$ 3,900
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	3091		Type 1 Catch Basin	3	Each	$ 4,000.00	$ 12,000
	1163		Underdrain Pipe 12 in Diam	120	L.F.	$ 110.00	$ 13,200
	7014		Gravel Backfill for Drain	70	C.Y.	$ 45.00	$ 3,150
			Construction Subtotal				**$ 48,997**
			Construction Contingency	20%			**$ 9,799**
			Lacey Cost Adjustment Factor	10%			**$ 4,900**
			Subtotal				**$ 63,696**
			Tax	9.7%			**$ 6,178**
			Construction Total (with Contingency and Tax)				**$ 69,874**
			Project Engineering	35%			$ 24,456
			Construction Engineering	25%			$ 17,469
			City of Lacey Project Management	10%			$ 6,987
			Project Total				**$ 118,786**
			Total Project Contingency	30%			$ 35,636
			Total Estimated Project Cost				$ 154,422
			Round UP Total Project Cost				**$ 160,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Stormwater Lift Station 01 Improvements (SW LS-01)**

Project Priority: Medium

Project Number: 25-12

Estimated Cost: $2,300,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The City acquired an old stormwater pump station through annexation. The pump station lacks emergency infrastructure and does not meet City standards. The storm pipes conveying water to the facility need replacement. No issues were observed with the adjacent pond.

PROJECT DESCRIPTION

Improve and add to the existing system to bring it up to City standards. The work includes new pumps and a new bypass port as well as upgrades to existing systems: electrical, piping, meters, fence, gate, safety systems (guard rails around the existing wet well), and vaults (adding gravel to the valve and meter vaults). Storm pipe in the right of way will be replaced and the roadway will be restored.
Coordination with the HOA is required.

Hidden Forest Pump Station pond

Hidden Forest Pump Station electrical building

COST ESTIMATE ASSUMPTIONS

New pumps and bypass port. Use existing building and upgrade electrical system, fences, and existing vaults. Replace approximately 1,500 linear feet of storm pipe and catch basins. Restore trench and overlay half the roadway with HMA.

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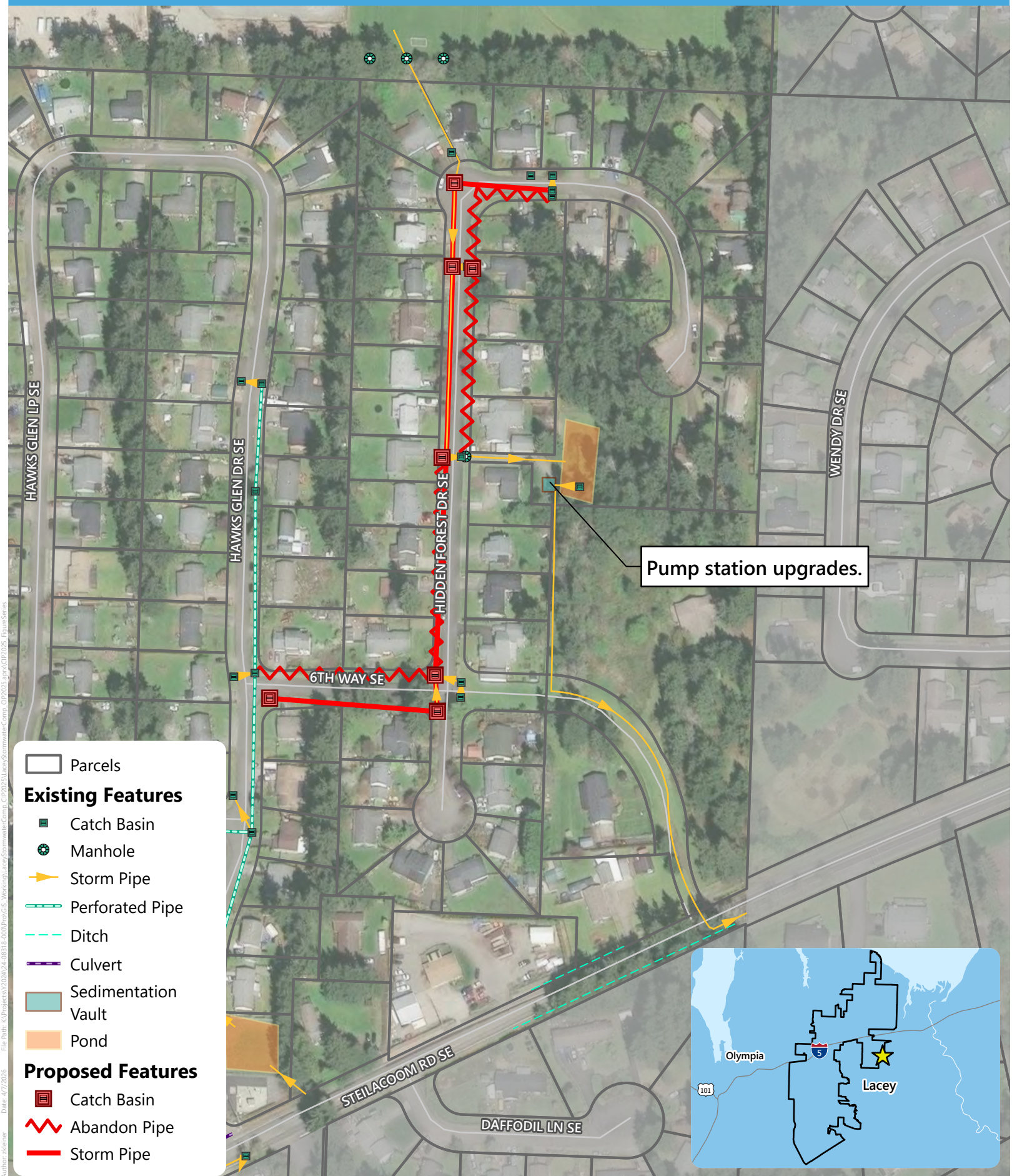
Conceptual Plan.
25-12: Stormwater Lift Station 01 Improvements (SW LS-01).



File Path: K:\Projects\Y2024\24-08318-000\ProvGIS_Working\LaceyStormwaterComp_CIP2025\LaceyStormwaterComp_CIP2025.aprx\CIP2025_FigureSeries
Date: 4/7/2026
Author: zkleiner

Project: Stormwater Lift Station 01 (Planning Level Estimate)					
	Items	**Unit**	**Unit price**	**Quantity**	**Cost**
	Minor Change	MC	$ 50,000	1	$ 50,000.00
	Mobilization	LS	$ 1	70,000	$ 70,000.00
	TESC	LS	$ 40,000	1	$ 40,000.00
	bypass port with manhole and piping (24" dia depth 4')	LS	$ 1	10,000	$ 10,000.00
	fencing and gate (include LF)	LS	$ 1	20,000	$ 20,000.00
	Electrical modifications, flow meter, pressure gauge	LS	$ 1	200,000	$ 200,000.00
	new pumps	LS	$ 1	70,000	$ 70,000.00
	New Storm pipe (1500 LF)	LF	$ 125	1,500	$ 187,500.00
	New Storm Structures	EACH	$ 4,000	7	$ 28,000.00
	HMA/CSBC/CSTC/Gravel (including Road and Vaults)	LS	$ 1	160,000	$ 160,000.00
	Sub Total				$ 835,500.00
	tax @ 9.7%				$ 81,044
	Construction Total				$ 916,544
	Construction Contingency at 20%				$ 183,309
	Total				$ 1,099,852
	PE at 35%				$ 384,948
	CE at 25%				$ 274,963
	Project Total				**$ 1,759,764**
	Total Project Contingency at 30%				$ 527,929.06
	Total Estimated Project Cost				$ 2,287,692.58
	Round UP Total Project Cost				**$ 2,300,000.00**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Woodland Creek at Martin Way Stormwater Improvements Study**

Project Priority: High

Project Number: 25-13

Estimated Cost: $280,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

Untreated stormwater discharges to this salmon-bearing stream. There are multiple sources of untreated flows, including piped conveyance from the 1,018 acre Tanglewilde neighborhood and sheet runoff from the road. There are several old facilities, constructed by WSDOT, that are no longer functioning.

PROJECT DESCRIPTION

Conduct a study of runoff and existing facilities at this site to identify feasible stormwater improvements. Map the site to confirm infrastructure. Identify approximate critical areas boundaries and other feasibility constraints. Develop retrofit concepts for existing facilities and new treatment facilities for untreated outfalls. The City will monitor water quality at this outfall as part of a separate effort and the collected data will be considered during the study.

Martin Way infrastructure at Woodland Creek

Northwest storm outlet into Woodland Creek

COST ESTIMATE ASSUMPTIONS

Review available data, develop a hydrologic model for each of the four basins, engage the community, and develop and evaluate stormwater treatment facility alternatives. Select the best alternative for each basin and document the results in report.

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Conceptual Plan.
25-13: Woodland Creek at Martin Way Stormwater Improvements Study.

N

Complete a study to develop retrofit concepts that will provide water quality treatment for stormwater discharging to Woodland Creek at this roadway crossing.

Historic stormwater facility that needs replacement.

Historic stormwater facility that needs replacement.

Historic stormwater facility that needs replacement.

36-inch diameter outfall from the Tanglewilde neighborhood tributary area (1,018 acres) discharging untreated stormwater to the stream.

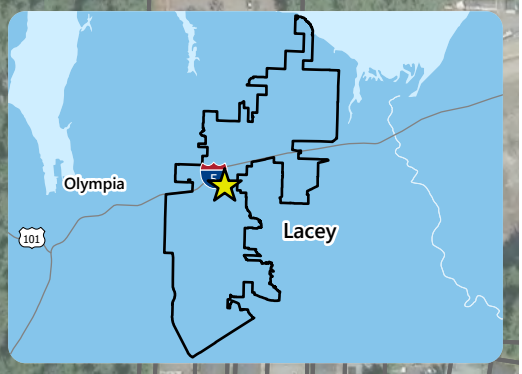
Woodland Creek

MARTIN WAY E

Parcels

Existing Features

- Catch Basin
- Manhole
- Outfall
- Storm Pipe
- Stream
- Wetland
- Gallery
- Pond



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Date: 4/7/2026
Author: zkleiner

Cost Estimate for Alternatives Analysis and Feasibility Study

Project Name: **Woodland Creek at Martin Way Stormwater Improvements Study**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Matt Fontaine
Last Updated On:	2/24/2026
Checked By:	Julianne Chechanover
Checked On:	2/25/2026
Back Checked By:	Matt Fontaine
Back Checked On:	2/26/2026
Verified By:	Julianne Chechanover
Verified On:	2/26/2026

		Task Number	Item Description	Qty	Unit	Unit Cost	Total Cost
			Study				
		1	Project Management	1		$ 20,000	$ 20,000
		2	Data Review and Field Verification	1		$ 40,000	$ 40,000
		3	Modeling	1		$ 20,000	$ 20,000
		4	Public Outreach Support	1		$ 20,000	$ 20,000
		5	Alternatives Analysis	1		$ 90,000	$ 90,000
			Study Subtotal				**$ 190,000**
			Subtotal				**$ 190,000**
			Tax				**$ -**
			Study Total (with Contingency and Tax)				**$ 190,000**
			City of Lacey Project Management	10%			$ 19,000
			Project Total				**$ 209,000**
			Total Project Contingency	30%			$ 62,700
			Total Estimated Project Cost				$ 271,700
			Round UP Total Project Cost				**$ 280,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Glen Mary Drive Stormwater Improvements**

Project Priority: High

Project Number: 25-21

Estimated Cost: $320,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

Infiltration galleries in this area are no longer functioning and are causing localized nuisance flooding. The City has been making minor improvements in this area since 1985, though a long-term solution has not been put into place. The City has installed some infiltration galleries in the Homann Area System to address flooding, but flooding is still an issue at the north end of the neighborhood along Glen Mary Drive. There is a sinking catch basin in this area.

PROJECT DESCRIPTION

Conduct a video survey of the existing system to evaluate constraints prior to design. Install a pretreatment BMP and an additional infiltration gallery along the west side of the road in order to adhere to slope setback requirements. Replace existing catch basins and piping if inspection indicates that is appropriate.

Proposed infiltration gallery location

Existing Glen Mary Dr SE infrastructure

COST ESTIMATE ASSUMPTIONS

Install an 80 foot long by 4 foot wide infiltration gallery and a pretreatment BMP. Includes 40 linear feet of conveyance pipe, a type 1 catch basin, and a type 2 catch basin.

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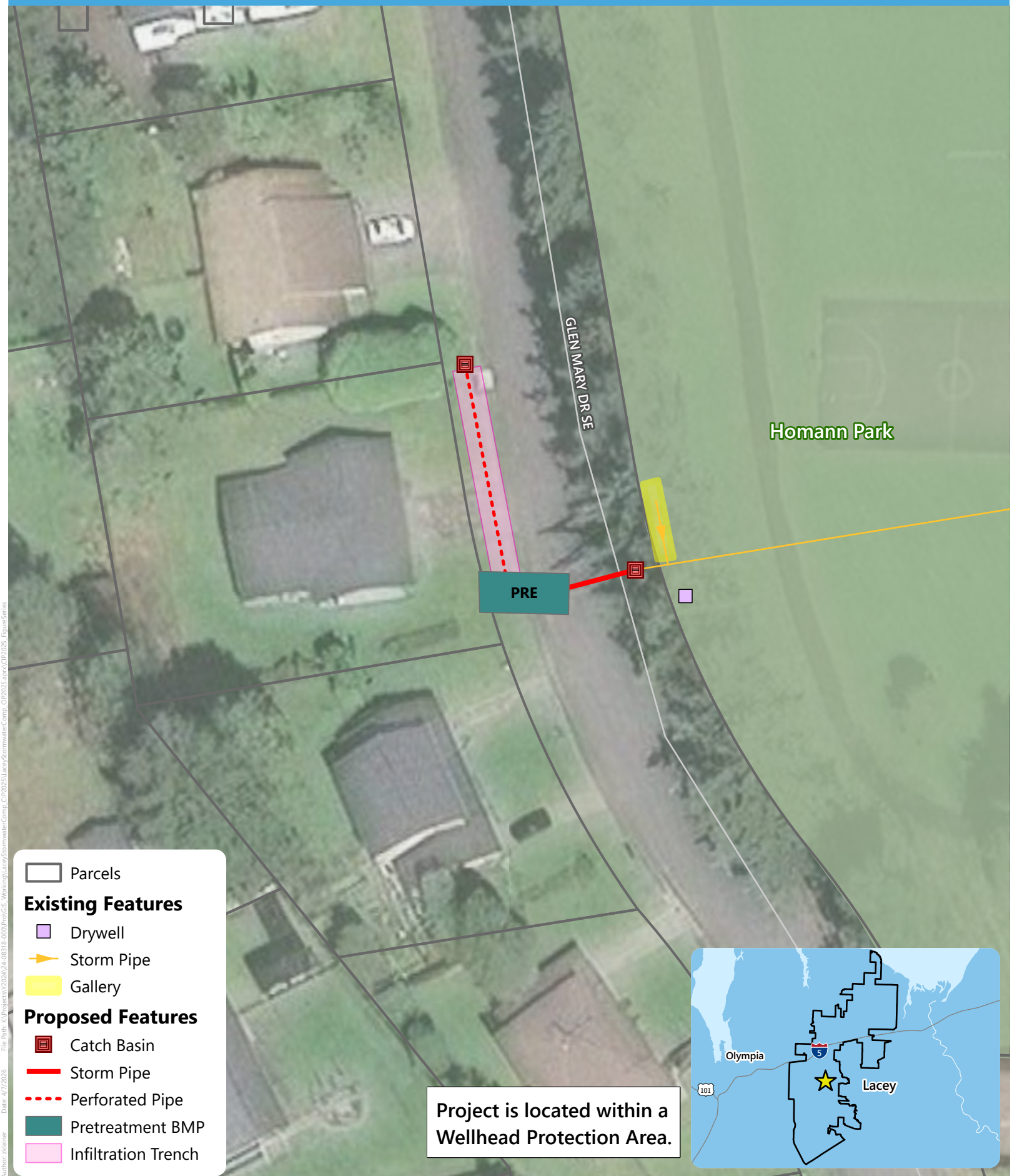
Science + Planning + Design

Conceptual Plan.
25-21: Glen Mary Drive Stormwater Improvements.



Parcels

Existing Features

- Drywell
- Storm Pipe
- Gallery

Proposed Features

- Catch Basin
- Storm Pipe
- Perforated Pipe
- Pretreatment BMP
- Infiltration Trench

Project is located within a Wellhead Protection Area.

File Path: K:\Projects\Y2024\24-08318-000\ProvGIS_Working\LaceyStormwaterComp_CIP2025\LaceyStormwaterComp_CIP2025.aprx\CIP2025_FigureSeries
Date: 4/7/2026
Author: zkleiner

Produced by Herrera Environmental Consultants (herrerainc.com) | Sources: ESRI (Aerial, 2023), Thurston County

0 15 30 60 Feet

Engineering Construction Cost Estimate for Conceptual Design

Project Name: **Glen Mary Drive Stormwater Improvements**
Project Number: **24-08318-000**
Client: **City of Lacey**

QA Review

Completed/Updated By:	Whitney Packard
Last Updated On:	12/23/2025
Approved By:	Matt Fontaine
Approved On.:	2/14/2026
Back Checked By:	Whitney Packard
Back Checked On:	2/20/2026
Verified By:	Matt Fontaine
Verified On:	3/2/2026

Item No.	WSDOT Std Item No.	Spec Section	Item Description	Qty	Unit	Unit Cost	Total Cost
		Div 1	**General Requirements**				
	0001		Mobilization	1	L.S.	10%	$ 6,886
	SP		Utility Protection and Relocation	1	L.S.	20%	$ 13,772
	6971		Project Temporary Traffic Control	1	L.S.	5%	$ 3,443
	6488		Erosion Control and Water Pollution Prevention	1	L.S.	10%	$ 6,886
	SP		Temporary Dewatering	1	L.S.	2.0%	$ 1,377
		Div 2	**Earthwork**				
	7006		Structure Excavation Class B Incl. Haul	60	C.Y.	$ 51.00	$ 3,060
		Div 4	**Bases**				
	5120		Crushed Surfacing Top Course	2	Ton	$ 150.00	$ 285
	5100		Crushed Surfacing Base Course	8	Ton	$ 150.00	$ 1,245
		Div 5	**Surface Treatments and Pavements**				
	5767		HMA Cl. ½" PG 58H-22	5	Ton	$ 300.00	$ 1,500
		Div 6	**Structures**				
	3091		Catch Basin Type 1	1	Each	$ 4,000.00	$ 4,000
	3105		Catch Basin Type 2 48 In. Dia.	1	Each	$ 6,000.00	$ 6,000
	SP		GULD Pretreatment BMP	1	Each	$ 20,000.00	$ 20,000
	0049		Drainage Structure Removal	2	Each	$ 2,000.00	$ 4,000
		Div 7	**Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**				
	3016		Schedule A Storm Sewer Pipe 12 in Diam	40	L.F.	$ 110.00	$ 4,400
	3018		Underdrain Pipe 24 in Diam	80	L.F.	$ 200.00	$ 16,000
		Div 8	**Miscellaneous Construction**				
	7014		Gravel Backfill for Drain	50	C.Y.	$ 45.00	$ 2,250
	0100		Removing Cement Conc. Sidewalk	60	S.Y.	$ 37.00	$ 2,220
	7055		Cement Conc. Sidewalk	60	S.Y.	$ 65.00	$ 3,900
			Construction Subtotal				**$ 101,224**
			Construction Contingency	20%			**$ 20,245**
			Lacey Cost Adjustment Factor	10%			**$ 10,122**
			Subtotal				**$ 131,591**
			Tax	9.7%			**$ 12,764**
			Construction Total (with Contingency and Tax)				**$ 144,356**
			Project Engineering	35%			$ 50,525
			Construction Engineering	25%			$ 36,089
			City of Lacey Project Management	10%			$ 14,436
			Project Total				**$ 245,405**
			Total Project Contingency	30%			$ 73,622
			Total Estimated Project Cost				$ 319,027
			Round UP Total Project Cost				**$ 320,000**

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Stormwater Design Manual Updates**

Project Priority: Mandated

Project Number: 25-X1

Estimated Cost: $300,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The Stormwater Design Manual (SDM) will need to be updated for consistency with Ecology's 2029-2034 Phase II Permit and 2029 Stormwater Management Manual for Western Washington (SWMMWW).

PROJECT DESCRIPTION

Update the Lacey SDM in 2031-2032 to be equivalent with Ecology's 2029 SWMMWW.

City of Lacey Stormwater Team

Field work

COST ESTIMATE ASSUMPTIONS

None.

City of Lacey
Stormwater Strategic Plan
Project Summary Sheet

Project Name: **Stormwater Strategic Plan Update**

Project Priority: Mandated

Project Number: 25-X2

Estimated Cost: $250,000
ENR CCI 14131.61 (February 2026)

PROBLEM DESCRIPTION

The City regularly updates their Stormwater Strategic Plan (SSP).

PROJECT DESCRIPTION

Complete the 2030 update to the SSP, including CIP and Stormwater Utility Financial Plan.

Flooding in Lacey

Field work

COST ESTIMATE ASSUMPTIONS

Assumes an 18 month project. Update focuses on program improvements that are needed to meet regulatory requirements and add new capital projects.

Appendix F

Gap Analysis

HERRERA
Science + Planning + Design

TECHNICAL MEMORANDUM

Date: April 9, 2026

To: Doug Christenson and Royce Young (City of Lacey)

From: Citlali Ramirez, Julianne Chechanover, and Rebecca Dugopolski (Herrera Environmental Consultants)

Subject: City of Lacey Stormwater Program Gap Analysis and Needs Assessment

QC Check/Review Record

Revision	Date	Description	By (Author)	Review (Technical)	Review (PM)	Approved (CSR)	Publications
00	*04/09/26*	*Technical Memorandum*	*JC*	*RD*	*JC*	*MF*	*MC*

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Introduction

Herrera Environmental Consultants, Inc. (Herrera) is supporting the City of Lacey (City) in updating its Stormwater Strategic Plan (SSP). One component of this update is the development of a list of Stormwater Management Program (SWMP) activities for implementation over the next nine years to meet program goals. This process includes evaluating existing activities and identifying additional actions to strengthen the program. The purpose of this technical memorandum is to:

- Identify program needs for the upcoming six years: Needs are identified to be required activities for SWMP compliance with regulations and to advance program goals.
- Monetize program needs: Direct monetary estimates and the amount of staff time necessary for implementation are considered.

This memorandum summarizes program goals, methods used to conduct gaps analyses, program needs, and next steps for developing the SSP.

Stormwater Management Program Elements and Long-Term Goals

In the process of updating the SSP, Herrera met City staff to update the long-term goals for each element of the SWMP. These long-term goals are organized by SWMP program element. Program elements are a comprehensive list of functions performed or influenced by the SWMP. The SWMP program elements and goals are described below:

- Flood Reduction: There is no flooding of the public stormwater system from the 100-year storm.
- Surface Water Quality Improvement: All surface waterbodies in Lacey meet water quality criteria for designated recreation and fish uses.
- Groundwater Protection and Recharge: Groundwater quality and quantity is not negatively affected by stormwater practices.
- Habitat Improvement: Aquatic species thrive in and along surface waterbodies in Lacey.
- Public Participation (Education, Outreach, and Involvement): City residents understand how their actions and choices affect stormwater, and they act in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.
- Pollutant Source Control: Pollutants do not enter stormwater, groundwater, or surface waterbodies.
- Infrastructure Operations and Maintenance: All stormwater infrastructure operates as intended.
- Development Practices: Runoff from developed areas mimics forested hydrology and water quality. Equitable service is provided to applicants for development projects.
- Stormwater Planning, Administration, and Funding: Revenue is wisely invested and produces measurable positive outcomes, including regulatory compliance. Utility rates are fair and equitable.

Regulations

In addition to the goals defined by the City, the SWMP must, at a minimum, comply with regulations. The most significant regulatory requirement facing the City's SWMP is the Washington State Department of Ecology's (Ecology) National Pollutant Discharge Elimination System (NPDES) Western Washington Phase II Municipal Stormwater Permit (Phase II Permit), which addresses a variety of issues associated with stormwater runoff and requires the City to develop several distinct SWMP components. These regulatory components are included within the City's list of SWMP program elements. The current Phase II Permit, effective on August 1, 2024, specifies requirements for the following:

- Stormwater Planning
- Public Education and Outreach
- Public Involvement and Participation
- Municipal Separate Storm Sewer System (MS4) Mapping and Documentation
- Illicit Discharge Detection and Elimination (IDDE)
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Stormwater Management for Existing Development
- Source Control Program for Existing Development
- Operations and Maintenance
- Total Maximum Daily Load (TMDL) Requirements
- Monitoring and Assessment
- Reporting

The deadlines associated with these regulations were accounted for when defining activities and resource needs for the SWMP.

Growth in the City of Lacey

The City of Lacey is located at the southern end of the Puget Sound, with Olympia to the west and unincorporated Thirston County surrounding its northern, eastern, and southern boundaries. The city limits encompass approximately 20 square miles, and the current population is 60,380 (TRPC 2025). Since the 1960s, Lacey has ranked among the fastest growing communities in the region (Lacey and Thurston County 2008). As the city expanded its boundaries and experienced steady residential and commercial development, the extent of impervious surfaces also grew substantially. The increase in paved and built areas has amplified stormwater runoff, intensifying demands on the City's stormwater infrastructure.

Methods of Analysis

To prepare this memorandum, the City's SWMP activities and supporting documents were evaluated against regulatory requirement and program goals to identify gaps and challenges related to growth and evolving regulations. The analysis primarily focused on compliance with the current and upcoming Phase II Permit, while also considering other long-term project needs.

Gaps and improvement opportunities were identified through document review, staff questionnaires, workshop discussions, and follow-up discussions. Needs assessment tables describing the City's current activities and recommendations for addressing gaps is provided in Appendix A. Staffing and funding estimates are provided in detailed implementation tables in Appendix B. The gap analysis questionnaires and level of service matrix are also provided in Appendix C and D, respectively.

Document Review

Herrera reviewed City-provided materials to establish a baseline for the existing SWMP. These included codes and policies, maps, and GIS data, SWMP plans, public education resources, and operations & maintenance (O&M) information. Ecology requires the City to prepare annual reports describing activities undertaken to meet Phase II Permit requirements. Current SWMP activities are documented in the 2025 annual report, submitted in March 2026, which outlines planned activities for permit compliance.

Questionnaire and Needs Assessment Meeting

After updating long-term SWMP goals, Herrera collaborated with City staff through meetings, calls, and emails from December 2024 to February 2025, beginning with the first of three workshops on January 28, 2025. Prior to the workshops, questionnaires were distributed to gather staff perspectives on the stormwater issues. Responses helped guide the discussion focusing on Phase II Permit requirements, O&M, stormwater plan review and construction inspections, staffing and resource needs, and broader SWMP goals. Questionnaire responses and workshop notes are included in Appendix C.

Results

Primary Factors Influencing the Stormwater Management Program

Pace of Development

In 2024, 46 projects were submitted and required review of complex stormwater site plans. This number has significantly increased in recent years from 43 plans in 2022 and 28 plans in 2018. As regulations have become more complicated, thorough site plan review has become more time intensive and technically difficult. The growing complexity is also reflected in the expansion of the City's Stormwater Design Manual (SDM). The SDM has increased from 640 pages in 2010 to 970 pages in 2022, which is a little over a 50 percent increase. The 2022 SDM also includes a 28-page drainage control plan checklist that is used

during the site plan review process. This has presented a challenge to the SWMP that will be exacerbated by future growth and additional regulatory complexity.

The Thurston Regional Planning Council (TRPC) projects that Lacey's population will grow by 12 percent between 2025 and 2035. This growth is expected to drive additional land development and redevelopment, creating more demand on the City's stormwater program. It is expected that the additional land development will expand into locations of the City with poorly draining soils, which will result in additional soil and groundwater analysis and longer review times for the City.

Without additional resources to review development plans and inspect projects under construction, the City faces risk due to improper facility function, which may cause flooding, poor water quality, groundwater contamination, and habitat damage. In addition to environmental risk, the City faces a risk of third-party lawsuits if facilities are built that do not comply with increasingly complex stormwater requirements. Additional staff resources for development plan review are necessary to enable stormwater program staff to execute required SWMP activities, including updating the SDM and Stormwater Management Action Planning (SMAP).

Phase II Permit Compliance

The main regulatory driver for the SWMP is the Phase II Permit. Under the 2024-2029 Phase II Permit the City must complete several defined activities during this permit term, including:

- Adopting and implementing tree canopy goals, policies, and mapping.
- Completing and submitting a SMAP for at least one new high-priority catchment (or expanding actions for an existing SMAP).
- Updating the City's SDM to be equivalent with the 2024 Stormwater Management Manual for Western Washington (SWMMWW).
- Incorporating overburdened communities in public outreach, mapping, and watershed planning (i.e., SMAP).

The following section includes a more complete list of new SWMP activities the City will need to complete to address new regulatory requirements.

Stormwater Management Program Activities

The results of the gap analysis are shown in the level of service matrix of proposed SWMP activities in Appendix D. This matrix is organized based on the SWMP program elements and includes two levels of service.

Levels of service for each program element define activities or projects that will be implemented over the 9-year planning period to make progress towards achieving the stated long-term goal for the program element. In general, increasing levels of service (i.e., from Required to Recommended) correspond with

more progress towards the goal. Ultimately, a cost (and utility rate) will be associated with both levels of service. Note that capital improvement projects (CIPs) are not discussed in detail in the gap analysis and needs assessment. However, the CIP projects in the SSP meet SWMP program elements as described below.

Required Level of Service

The required level of service is compliant with current and future permit requirements, maintains existing programs, and implements critical capital projects (list of critical capital projects will be identified separately). This is the minimum-cost tier for each program element. This level of service includes the following key activities organized by applicable SWMP program elements and goals:

- Flood Reduction: Reduce flooding by developing CIPs that include flow control facilities/best management practices (BMPs).
- Surface Water Quality Improvement: Improve surface water quality by developing CIPs that include stormwater treatment facilities/BMPs to treat existing untreated discharges.
- Groundwater Protection and Recharge: Protecting groundwater quality and quantity through implementation of the Underground Injection Control (UIC) program.
- Public Participation (Education, Outreach, and Involvement): Provide opportunities for overburdened communities to participate in stormwater-related activities.
- Pollutant Source Control: Reduce the amount of pollutants that enter stormwater, groundwater, and surface waterbodies by adding source control BMPs for polychlorinated biphenyls (PCBs) and mapping all MS4 tributary basins to outfalls so pollutants can be traced more efficiently.
- Infrastructure Operations and Maintenance: Ensure that the City's street sweeping program includes priority area criteria, sweeping timing and frequency, and information tracking and reporting.
- Development Practices: Continue to manage stormwater on development projects by providing project oversight (e.g., conducting thorough reviews of drainage control plans, conducting frequent and comprehensive inspections during construction, conducting post-construction verification testing), reviewing new and existing City policies to promote Low Impact Development (LID), and updating the SDM.
- Stormwater Planning, Administration, and Funding: Focus stormwater management efforts in locations where they will have the greatest positive outcome, by updating the City's SMAP for the highest priority basin (Woodland Creek) and implement project(s) that manage 9.3 equivalent acres.

A summary of all required level of service activities and programs organized by Phase II Permit sections, CIP, and UIC Rule are included below.

Stormwater Planning

- The Technical Advisory Group (TAG) should continue to meet periodically to discuss topics and provide recommendations to departments and programs with stormwater management program responsibilities.
- Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2027 Annual Report.
- Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2032 Annual Report (expected to be required under S5.C.1.b of the 2029-2034 Permit).
- Continue to annually assess and document administrative or regulatory barriers to implementation of LID principles or LID BMPs.
- Develop and adopt tree canopy goals and policies to support stormwater management by December 31, 2028.
- Document considerations, reasoning, and rationale for tree canopy goals and policies to support stormwater management by December 31, 2028.
- Add actions to the Woodland Creek SMAP by March 31, 2027.
- Develop a new SMAP or add actions to an existing SMAP by March 31, 2032 (expected to be required under S5.C.1.d of the 2029-2034 Permit).

Public Education and Outreach

- Develop materials for one new target audience and one new subject area annually.
- Implement new or modify existing education and outreach activities, continue to track activities, and monitor success.
- Develop public education and outreach SOPs to assess both publicly-owned and privately-owned buildings for PCB-containing materials, and to educate contractors/building owners on the new requirements for pressure washing and demolition/renovation.
- Evaluate the effectiveness of the City's ongoing behavior change campaign prior to July 1, 2030 (expected to be required under S5.C.2.a.ii of the 2029-2034 Permit).
- Develop a behavior change evaluation report to submit with the 2029 Annual Report.
- Evaluate the effectiveness of the behavior change campaign and adjust as needed.
- Continue to host, promote, and advertise stewardship activities.

Public Involvement and Participation

- Continue to provide opportunities for public input, including overburdened communities, on the City's stormwater website related to the SWMP Plan and SMAP.
- Continue to post the updated SWMP Plan and Annual Report on the City's website.
- Continue to document methods used to identify overburdened communities.
- Develop an outreach program to further engage overburdened communities.

MS4 Mapping and Documentation

- Continue to maintain and update the City's MS4-related mapping data on an ongoing basis.
- Map tree canopy to support stormwater management on City-owned or operated properties by December 31, 2026.
- Implement a methodology to map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have stormwater treatment and flow control BMPs/facilities owned or operated by the City and submit it in the 2028 Annual Report.
- Continue to update outfall mapping information as needed.
- Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on City-owned or operated properties by December 31, 2026.
- Continue to maintain electronic maps and corresponding data attributes.

Illicit Discharge Detection and Elimination

- Continue to provide information regarding the City's pollution prevention and control resources, including methods for reporting spills, illicit discharges, and illicit connections.
- Review and update the Lacey Municipal Code (LMC) to reflect the new requirements prohibiting washdown water from buildings containing PCB materials and post-emergency clean-up procedures.
- Continue field screening for illicit connections and illicit discharges.
- Continue to implement spill hotline and online reporting form.
- Continue to implement staff training program.
- Continue to implement the IDDE training for the Lacey Police Department.
- Continue to work with the City's Street/Storm Maintenance Division and Community and Economic Development departments to develop post-emergency clean-up procedures.
- Continue to work with Lacey Fire District 3 to develop procedures for clean-up.

- Continue to respond to spills and water quality complaints.
- Continue tracking the number of illicit discharges, illicit connections, and spills.
- Continue to implement staff training program.
- Continue to report illicit discharge data to Ecology.
- Summarize annual activities for the IDDE component of the Annual Report, including updates to the SWMP Plan.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

- Update the City's SDM to incorporate and adopt the required updates from Ecology's 2024 SWMMWW by June 30, 2027.
- Update the City's SDM to incorporate and adopt the required updates from Ecology's 2029 SWMMWW by June 30, 2032 (expected to be required under S5.C.6.b of the 2029-2034 Permit).
- Conduct staff training on implementation of the updated SDM (including implementation of the wet season SWPPP).
- Continue to implement stormwater plan review.
- Continue to implement preconstruction erosion and sediment control inspections.
- Continue to refine and improve enforcement procedures to ensure proper installation and maintenance of erosion and sediment control BMPs.
- Continue to inspect all stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments at least twice per 12-month period.
- Continue to inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities.
- Continue to support Ecology by providing the "Notice of Intent" (NOI) forms for Construction Activity and Industrial Activity.
- Continue to implement staff training program.

Stormwater Management for Existing Development

- Select a set of strategic stormwater investments identified in the SMAP, stormwater CIP, or opportunistic stormwater investments identified by leveraging projects outside of SMAP areas.
- Identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's compliance target of 9.3 equivalent acres.

- Continue to identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's future compliance target in the 2029-2034 Permit.
- Develop a list of planned projects, update annually, and submit to Ecology with the Annual Report.
- Fully fund, start construction, or completely implement project(s) that manage 9.3 equivalent acres.
- Submit documentation of achieving the 9.3 equivalent acre target with the 2028 Annual Report.
- Consider coordinating with Thurston County and the Cities of Olympia and Tumwater on stormwater investments to meet regional goals (the City can receive up to 25 percent of assigned acreage credit from collaborative projects if at least 0.5 equivalent acres are managed within the City).
- Report the amount of estimated or projected equivalent acres managed by stormwater facility retrofits, restoration projects, and maintenance activities (e.g., street sweeping and line cleaning) to submit with the 2028 Annual Report.

Source Control Program for Existing Development

- Continue to refine and improve escalating enforcement procedures, including roles and responsibilities.
- Continue to update the source control inventory at least once every five years.
- Continue to implement escalating enforcement if sites do not comply with source control program requirements.
- Continue to provide information about the source control program to business owners and operators.
- Continue to meet the 20 percent inspection target for the source control program on an annual basis.
- Continue to respond to credible complaints.
- Continue to implement source control onboarding and refresher trainings.
- Continue to allow staff to obtain the Professional Source Control Inspector Certification (PSCIC) if source control inspections are part of their job function.

Operations and Maintenance

- Continue annual review of O&M Program and performing maintenance promptly (within the timelines specified in the Permit).
- Update the Lacey SDM to include Ecology's updated maintenance standards.
- Continue to implement a program to verify adequate long-term O&M of private stormwater treatment and flow control BMPs/facilities.

- Continue to document inspections and escalating enforcement actions for private stormwater flow control and treatment BMPs/facilities.
- Continue to annually inspect and maintain municipally owned or operated stormwater treatment and flow control BMPs/facilities according to Permit requirements.
- Continue to implement spot checks and inspections after major storms.
- Continue to inspect catch basins and maintain as needed.
- Update practices, policies, and procedures to include Source Control BMPs for minimizing PCBs entering the MS4 from City-owned buildings exterior cleaning and maintenance and to prevent PCBs from entering the MS4 in preparation for and during demolition and renovation of City-owned buildings by December 31, 2027.
- Compare the City's established street sweeping program to the 2024-2029 Permit requirements to determine where adjustments may be needed.
- Compare the City's established street sweeping program to the 2029-2034 Permit requirements to determine where adjustments may be needed.
- Continue with street sweeping throughout the city when developing priority areas.
- Submit the street sweeping priority areas in the 2028 Annual Report.
- Review and update as necessary, the City's existing sweeping program and procedures to ensure compliance with Permit obligations (i.e., priority area criteria, sweeping timing and frequency, and information tracking and reporting).
- Continue to update and implement Stormwater Pollution Prevention Plans (SWPPPs) as needed.
- Continue to conduct routine SWPPP inspections per the schedule outlined in the SWPPPs.
- Verify that completed inspection forms are kept with the SWPPPs at each site.
- Continue to implement staff training program.
- Continue to document and maintain records of training for City staff.
- Summarize O&M activities in Annual Report, including updates to the SWMP Plan.

Total Maximum Daily Load (TMDL) Requirements

- Keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).
- No later than December 31, 2027, begin using existing data to conduct spatial analysis of nutrient loading from the MS4.

- No later than August 1, 2028, develop and implement priority BMPs to minimize the transport of nutrients via the MS4.
- Designate areas discharging via the MS4 to Budd Inlet as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for nutrient sources in 100 percent of these areas by July 31, 2029, and implement the schedules and activities identified in S5.C.5 of the Phase II Permit in response to any illicit discharges found.
- Develop a sampling plan for untreated outfalls near Chambers Lake.
- Update the Henderson TMDL Coordinated Sampling Plan in 2029 for the 2029-2034 Phase II Permit.
- Annually implement best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Phase II Permit.
- Continue to implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Phase II Permit.
- Continue to communicate with the City of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities.
- Perform fecal coliform bacteria sampling at the stormwater pipe located on River Mile 3.7 (i.e., Tanglewilde pipe) of Woodland Creek.
- Annually report on temperature reduction measures in the Deschutes River Watershed.

Monitoring and Assessment

- Continue to make annual payment of $14,545 (by August 15th each year) to the collective fund for S8.A.
- Continue to make annual payment of $21,527 (by August 15th each year) to the collective fund for S8.B.
- Continue to provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active Stormwater Action Monitoring (SAM) projects.

Reporting

- Continue to update the SWMP Plan, answer the Annual Report questions, and submit the Annual Report each year.
- Continue retaining records for a minimum of five years after the expiration date of the Permit.

Capital Improvement Program (CIP)

- Meet the Stormwater Management for Existing Development (SMED) requirements found in Section S5.C.7 and Appendix 12 of the 2024-2029 Phase II Permit.

Underground Injection Control (UIC) Rule

- Review the status of existing municipally owned UIC wells to ensure they are properly registered with Ecology's UIC Program.
- Identify any additional UIC Class V wells that predate February 3, 2006 and complete well assessments, if necessary.
- Conduct annual maintenance inspections of municipal UIC wells.
- Perform maintenance activities on UIC wells when inspections identify an exceedance of maintenance standards.
- Integrate areas served by municipal UIC wells into the Illicit Discharge Detection and Elimination (IDDE) Program as part of routine response activities.
- Create a map of all municipal UIC wells to be used during IDDE spill response activities.
- Continue to provide comments during the site plan review process prior to construction and inspections during construction to ensure compliance with the latest SDM.
- Continue to remind private UIC well owners of the requirement to register all UIC wells with Ecology.

Recommended Level of Service

The recommended level of service expands programs to make more progress towards long-term goals and implements critical, high, and moderate priority capital projects. In addition to the activities from the required level of service, this level of service includes the following key activities organized by the City's SWMP program elements and goals:

- Flood Reduction: Reduce flooding by developing additional CIPs that include flow control facilities/BMPs.
- Surface Water Quality Improvement: Improve surface water quality by developing additional CIPs that include stormwater treatment facilities/BMPs to treat existing untreated discharges.
- Habitat Improvement: Improve riparian areas in need of restoration.
- Public Participation (Education, Outreach, and Involvement): Tailor public outreach programs and resources to be specific to the City of Lacey.
- Pollutant Source Control: Further develop and implement illicit discharge source control programs.
- Infrastructure Operations and Maintenance: Establish ongoing stormwater operations and maintenance programs for private facility maintenance for major projects, catch basin grouting, ditch and culvert maintenance, stormwater conveyance condition assessment and rehabilitation/replacement, and pond maintenance.

- Development Practices: Work towards standardizing plan review, inspections, enforcement, and compliance for development projects.
- Stormwater Planning, Administration, and Funding: Coordinate with other City departments (e.g., Planning, Street/Storm Maintenance Division, and Community and Economic Development) on shared interests related to stormwater management.

A summary of all recommended level of service activities and programs organized by Phase II Permit sections, CIP, and UIC Rule are included below. This does not include the required level of service activities summarized in the previous section.

Stormwater Planning

- Continue to coordinate with Planning staff on how stormwater management, protection, and improvement of water quality, LID, and tree canopy will impact long-range planning.

Public Education and Outreach

- Develop quarterly public stormwater and water resource protection workshops.
- Continue collaboration with other jurisdictions to identify new priority audiences/BMPs and program evaluation techniques.
- Develop strategy and schedule and begin broadscale implementation of behavior change for selected priority audience(s) and behavior(s).
- Tailor the Adopt-a-Drain program to be relevant to City residents and businesses.
- Conduct public education and outreach on implementation of the updated SDM.
- Develop an overburdened community pet waste program.
- Continue to coordinate with Parks on stewardship events.
- Identify additional riparian areas in need of restoration (planting, invasive removal, erosion control) to expand stewardship opportunities (including at Greg Cuoio Park).

Public Involvement and Participation

- Host a yearly open house to discuss the City's SWMP Plan, SMAP, and SMED program and projects.
- Update the Stormwater and Stormwater Utility webpages on the City's website using user experience (UX) principles.

MS4 Mapping and Documentation

- Continue to develop a defined schema for infrastructure data stored in GIS.
- Hire an intern to support stormwater GIS updates in older areas of the city.

- Evaluate using a drone to support ongoing mapping.
- Continue to map the City's ditch network.
- Apply for a Department of Natural Resources (DNR) grant to perform an additional tree canopy assessment.
- Develop an SOP for mapping and mapping updates.

Illicit Discharge Detection and Elimination

- Further develop and implement a stormwater outfall illicit discharge screening program.
- Review and revise upstream illicit discharge source control programs to respond to illicit discharges found and/or reported.
- Develop an illicit discharge enforcement SOP.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

- Revise information management systems to track and report construction, new development and redevelopment permits, inspection and enforcement actions and Private Drainage Inspection Program inspections and enforcement actions.
- Develop standardized plan review, inspection, enforcement and compliance documentation and tracking processes and procedures.
- Conduct WWHM, MGSFlood, MODFLOW, MODRET, and other software training for staff who perform modeling as one of their job duties.

Source Control Program for Existing Development

- Evaluate the need to revise monetary penalties for stormwater violations (e.g., construction, source control, private facility maintenance).
- Continue to train staff on SwiftComply software.

Operations and Maintenance

- Review and update inspection, operation and maintenance processes and procedures for City owned or operated stormwater catch basins, flow control and treatment facilities.
- Continue to coordinate with North Thurston Public Schools on inspections of schools within the city.
- Continue to coordinate with Lacey Fire District 3 on inspections of fire stations within the city.
- Develop a private facility stormwater inspection program for major maintenance projects.
- Develop a checklist to help with spot checks.
- Purchase a small, single axle vactor truck to perform catch basin cleanings on narrow streets.

- Develop a catch basin grouting program.
- Develop a ditch and culvert maintenance program.
- Develop a stormwater conveyance condition assessment and rehabilitation/replacement program.
- Develop a pond maintenance program.
- Continue to train staff on Naviline software.
- Rent a street sweeper to sweep on residential streets during the leaf season.
- Evaluate retrofit opportunities for the City's decant facility, including options for material storage covers and solids drying.

Monitoring and Assessment

- Coordinate monitoring activities related to shared facilities (e.g., the Fones Road Stormwater Facilities) or for areas with multiple authorities (e.g., the Woodland Creek basin) with the City of Olympia and Thurston County on an annual basis.

Next Steps

Initial cost estimates for outside cost and additional staff time have been defined for each activity and program. The costs, staff time, and organization of activities and programs into level of service categories will continue to be refined throughout the SSP development. These needs, and CIP needs, will be used as inputs into the utility rate analysis.

The outside costs and additional staff time will be used to calculate the necessary rate increases to implement each level of service for each program element. Interested parties and decision makers will then compare progress towards long-term goals (i.e., outcomes) with rate impacts to select the suite of activities and programs that support the SWMP and will be implemented over the next nine years. Appendix B shows initial estimates for outside support costs and additional staff time over the next nine years to implement the activities and programs listed above. Summaries of the outside costs and additional staff time estimates in Appendix B are provided in Tables 1 and 2 below.

Table 1. Summary of Additional Outside Support Cost[a].

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Level of Service	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Required	$36,072	$51,072	$48,072	$46,072	$96,072	$48,072	$46,072	$46,072	$48,072
Recommended[b]	$57,072	$662,072	$669,072	$1,612,072	$922,072	$884,072	$882,072	$862,072	$864,072

[a] Funding estimates were developed in November 2025 and do not include escalation.

[b] The recommended level of service is inclusive of the required level of service.

Table 2. Summary of Additional Staff Time (FTE)[a].

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Level of Service	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Required	2.58	5.13	5.02	5.13	5.12	5.04	5.02	5.02	5.02
Recommended[b]	2.84	5.90	6.36	6.41	6.36	6.32	6.30	6.24	6.24

FTE = Full-Time Equivalent

[a] One FTE is equal to 1,768 hours of staff time.

[b] The recommended level of service is inclusive of the required level of service.

References

Lacey and Thurston County. 2008. City of Lacey and Thurston County Land Use Plan for the Lacey Urban Growth Area. Prepared by the City of Lacey and Thurston County.

TRPC. 2025. Population, Housing, and Employment Data. Updated in June 2025, Accessed November 24, 2025. <https://www.trpc.org/480/Population-Housing-and-Employment-Data>

Appendix A

Stormwater Management Program Needs Assessment Tables

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Table A-1. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Planning.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.1.a – 1. Stormwater Planning Each Permittee shall implement a Stormwater Planning program to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters. The minimum performance measures are: S5.C.1.a Each Permittee shall continue to convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● As part of the 2026 Stormwater Comprehensive Plan (SCP) update process, the City's inter-disciplinary team, or otherwise known as the Technical Advisory Group (TAG), which consists of representatives from various city departments, will convene to help guide them through their comp plan development. The TAG met for the first time to discuss the SCP on December 5, 2024, and will continue to meet periodically throughout 2025 to provide input for the updated Capital Projects list and the stormwater maintenance programs. • During the current reporting period, the city's ongoing planning activities include updating the City's SCP. From 2025 workshop: ● An inter-disciplinary team meets all together during development of the SCP, the most recent one being in December 2024. Small partial groups meet as needed to focus on specific development projects.	● The TAG should continue to meet periodically to discuss topics and provide recommendations to departments and programs with stormwater management program responsibilities.	● None
S5.C.1.b – Coordination with long-range plan updates (continued) "i. Each Permittee shall describe how stormwater management needs and protection/improvement of receiving water health are (or are not) informing the long-range or comprehensive planning update processes and influencing policies and implementation strategies in their jurisdiction in the Annual Report, due March 31, 2027. The Annual Report shall describe the water quality and watershed protection policies, strategies, codes, and other measures intended to protect and improve local receiving water health through planning, considering stormwater management needs or limitations."	From 2025 SWMP Plan: ● The Comprehensive Land Use Plan is Lacey's comprehensive vision for development of the city over the next 20 years. o It consists of a series of text elements articulating goals and policies for various topic areas and a land use map. ● The City's Comprehensive Land Use Plan includes elements on land use, housing, transportation, utilities, capital facilities, environmental protection and resource conservation, economic development, climate, and sustainability. o The land use map shows the entire Lacey Urban Growth Area (UGA) and designates properties for particular categories of land uses. • Thurston County and the City of Lacey developed the majority of the Comprehensive Land Use Plan as a cooperative "joint" effort. • The land use, housing and utilities elements, and the land use map were adopted by both jurisdictions in the same form. • Therefore, properties in the Lacey UGA, either in the incorporated city or unincorporated county, will be operating under the same Comprehensive Land Use Plan language and the same Plan map.	● Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2027 Annual Report. ● Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2032 Annual Report (expected to be required under S5.C.1.b of the 2029-2034 Permit).	● Continue to coordinate with Planning staff on how stormwater management, protection and improvement of water quality, low impact development (LID), and tree canopy will impact long-range planning.

Table A-1 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Planning.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.1.c – Low impact development code-related requirements "i. Permittees shall continue to require LID Principles and LID BMPs when updating, revising, and developing new local development-related codes, rules, standards, or other enforceable documents, as needed. The intent shall be to make LID the preferred and commonly used approach to site development. The local development-related codes, rules, standards, or other enforceable documents shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible. Annually, each Permittee shall assess and document any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs since local codes were updated in accordance with the 2013 Permit, and the measures developed to address the barriers. If applicable, the report shall describe mechanisms adopted to encourage or require implementation of LID principles or LID BMPs."	From 2024 Annual Report: ● The City did not identify any administrative or regulatory barriers to implementation of LID principles or LID BMPs. From 2025 workshop: ● The City monitors revisions to the Lacey Municipal Code (LMC) but formal reviews are not conducted on a regular schedule. ● The City can meet LID standards without incorporating any LID BMPs, which is the biggest barrier to implementing LID. Personal communication with Doug Christenson (2025): On commercial & multifamily sites, it is common to meet the LID standard by using manufactured treatment systems and infiltration galleries (which are not typically listed as LID BMPs) along with roof downspout infiltration (if feasible) and post-construction soil quality & depth (a required LID practice).	● Continue to annually assess and document administrative or regulatory barriers to implementation of LID principles or LID BMPs.	● Continue to coordinate with the Planning staff on how stormwater management, protection and improvement of water quality, LID, and tree canopy will impact long-range planning.
S5.C.1.c – Low impact development code-related requirements "i. Permittees shall continue to require LID Principles and LID BMPs when updating, revising, and developing new local development-related codes, rules, standards, or other enforceable documents, as needed. The intent shall be to make LID the preferred and commonly used approach to site development. The local development-related codes, rules, standards, or other enforceable documents shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations, where feasible. a. Annually, each Permittee shall assess and document any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs since local codes were updated in accordance with the 2013 Permit, and the measures developed to address the barriers. If applicable, the report shall describe mechanisms adopted to encourage or require implementation of LID principles or LID BMPs."	From 2024 Annual Report: ● The City did not identify any administrative or regulatory barriers to implementation of LID principles or LID BMPs. From 2025 workshop: ● The City monitors revisions to the Lacey Municipal Code (LMC) but formal reviews are not conducted on a regular schedule. ● The City can meet LID standards without incorporating any LID BMPs, which is the biggest barrier to implementing LID. Personal communication with Doug Christenson (2025): ● On commercial & multifamily sites, it is common to meet the LID standard by using manufactured treatment systems and infiltration galleries (which are not typically listed as LID BMPs) along with roof downspout infiltration (if feasible) and post-construction soil quality & depth (a required LID practice).	● Continue to annually assess and document administrative or regulatory barriers to implementation of LID principles or LID BMPs.	● Continue to coordinate with the Planning staff on how stormwater management, protection and improvement of water quality, LID, and tree canopy will impact long-range planning.

Table A-1 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Planning.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.1.c – Low impact development code-related requirements (tree canopy) "iii. No later than December 31, 2028, adopt and implement tree canopy goals and policies to support stormwater management. Permittees shall consider how existing or future tree canopy can support stormwater management and water quality improvements in receiving waters. Establish a long-term (e.g. 5, 10 year or longer) goal of canopy, existing or future projection, to be used for stormwater management that is appropriate to the jurisdiction. Specific considerations for canopy for stormwater management on Permittee-owned or operated lands shall include (but are not limited to): a. Maintaining or increasing canopy in overburdened communities. b. Maintaining existing mature canopy. Document considerations, reasoning, and rationale for goals and policies."	From 2025 SWMP Plan: ● The City has started gathering information and data regarding Lacey's tree canopy. ● The City is trying to understanding the future of the tree canopy due to the emerald ash borer. ● The City is beginning to establish long-term goals for tree canopy that can be used for stormwater management. From 2025 workshop: ● Tree canopy mapping has experienced funding/grant challenges o The Economic Development Council (EDC) is in the process of helping the City incorporate identified overburdened neighborhoods into the City's geodatabase. ● Many existing ash trees will need to be replaced due to safety concerns associated with emerald ash borer infestations. Personal communication with Royce Young (2025): ● The EDC has provided a map, which includes 5 years of data from the American Community Survey (ACS). ● The City has also created an equity map, which includes overburdened communities.	● Develop and adopt tree canopy goals and policies to support stormwater management by December 31, 2028. ● Document considerations, reasoning, and rationale for tree canopy goals and policies to support stormwater management by December 31, 2028.	● Continue to coordinate with the Planning staff on how stormwater management, protection and improvement of water quality, LID, and tree canopy will impact long-range planning.

Table A-1 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Planning.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.1.d – Stormwater Management Action Planning (SMAP) "Permittees shall conduct a similar process and consider the range of issues outlines in the Stormwater Management Action Planning Guidance (Ecology, 2024; Publication no. 24-10-027) for one new priority catchment or additional actions for an existing SMAP. A purpose of the SMAP is to support implementation in the Stormwater Management for Existing Development (SMED) Program with the identification of strategic investment through the identification of projects and actions. i. Stormwater Management Action Plan (SMAP). No later than March 31, 2027, Permittees shall complete and submit a SMAP for at least one new high priority catchment area, or additional actions for an existing SMAP, that identifies all of the following: (a) A description of the stormwater facility retrofits needed for the area, including the BMP types and preferred locations. Include projects that address transportation-related runoff from high traffic areas. (b) Land management/development strategies and/or actions identified for water quality management. (c) Focused, enhanced, or customized implementation of stormwater management actions related to Permit sections within S5, including: ● IDDE field screening; ● Prioritization of Source Control inspections; ● O&M inspections or enhanced maintenance; or ● Public Education and Outreach behavior change programs. Identified actions shall support other specifically identified stormwater management strategies and actions for the basin overall, or for the catchment area in particular. (d) If applicable, identification of changes needed to local long-range plans to address SMAP priorities. (e) A proposed implementation schedule and budget sources for: ● Short-term actions (i.e., actions to be accomplished within six years); and ● Long-term actions (i.e., actions to be accomplished within seven to 20 years). (f) Actions in the SMAP that may benefit overburdened communities, including specifically vulnerable populations and highly impacted Communities. (g) A process and schedule to provide future assessment and feedback to improve the planning process and implementation of procedures or projects."	From 2025 SWMP Plan: ● The City will be reviewing and updating the Woodland Creek SMAP to add additional actions to support the implementation of the SMED Program. From 2025 workshop: ● Proposed projects for SMED include: o Rehabilitation on Westminster Pond to incorporate additional treatment o Woodland Creek Regional Facility filters o Added street sweeping ● Identified barriers include: o Land acquisition o Funding o Street sweepers purchasing o Limited staffing for conducting maintenance on bioretention facilities Personal communication with Royce Young (2025): ● Westminster Pond and Woodland Creek Facility Filters projects have been completed. ● The 6th Ave NE and College Street project is under construction. ● Additional proposed projects for SMED include: o Ruddell Road Facility Retrofit (includes land acquisition) o 37th and Ryan St (includes land acquisition) o Woodland Creek and Martin Way ● These additional proposed projects will also be CIP projects in the SCP. ● The City has purchased an additional street sweeper to meet SMED requirements after receiving an electric vehicle exemption from Ecology.	● Add actions to the Woodland Creek SMAP by March 31, 2027. ● Develop a new SMAP or add actions to an existing SMAP by March 31, 2032 (expected to be required under S5.C.1.d of the 2029-2034 Permit).	● None

Table A-2. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Public Education and Outreach.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.2. – Public Education and Outreach "The SWMP shall include an education and outreach program designed to: • Build general awareness about methods to address and reduce impacts from stormwater runoff; • Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts; and • Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff. Permittees may choose to meet these requirements individually or as a member of a regional group. Regional collaboration on general awareness or behavior change programs, or both, includes Permittees developing a consistent message, determining best methods for communicating the message, and when appropriate, creating strategies to effect behavior change. If a Permittee chooses to adopt one or more elements of a regional program, the Permittee should participate in the regional group and shall implement the adopted element(s) of the regional program in the local jurisdiction. The minimum performance measures are: a. Each Permittee shall implement an education and outreach program. The program design shall be based on local or regional (or a combination of both) water quality information and priority audience characteristics to identify high priority audiences, subject areas, and/or BMPs. Based on the priority audience's demographic, the Permittee shall consider delivering its selected messages in language(s) other than English, as appropriate to the priority audience. i. General awareness. To build general awareness, Permittees shall annually select, at a minimum, one priority audience and one subject area from either (a) or (b): (a) Priority audiences: General public (including overburdened communities, school age children, college/university, or trade students) or businesses (including home-based, or mobile businesses). Subject areas: • General impacts of stormwater on surface waters, including impacts from impervious surfaces. • Low impact development (LID) principles and LID BMPs. (b) Priority audiences: Engineers, contractors, developers, property owners/managers, or land use planners. Subject areas: • Technical standards for stormwater site and erosion control plans. • LID principles and LID BMPs. • Stormwater treatment and flow control BMPs/facilities. • Source control BMPs for building materials to reduce pollution to stormwater, including but not limited to stormwater pollution from PCB-containing materials. (c) Permittees shall provide subject area information to the priority audience on an ongoing or strategic schedule."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● The City addresses general impacts through multiple outreach strategies, including City and Stream Team websites; social media platforms like Facebook, Instagram, and YouTube; informational meetings, workshops, and field trips; newspaper and newsletter articles; printed materials; school projects; community events; and press releases. ● The City provides brochures covering multiple aspects of stormwater management from flow control to streamside vegetation. They are used in conjunction with activities to educate and involve the public in the protection of our environment and water resources. ● The City provides a stormwater curriculum to all 6th grade students within the North Thurston School District. This 3-day lesson was taught to 652 students in collaboration with 7 teachers in 2024. ● The City piloted 3-day outdoor field trip in October 2024 with three 7th/8th grade science classes from Komachin Middle School (MS). Lessons involved learning about native plants and their importance in our landscape, how parks are planned, and how different people use or interact with outdoor spaces. All 7th and 8th grade students from Komachin MS participated in the field trip. ● The City is a member of the Stormwater Outreach for Regional Municipalities (STORM) Group, which is a coalition of cities and counties in the Puget Sound region, working together to address nonpoint source pollution by advancing broad-scale behavior change among Puget Sound residents. The group has implemented an Ecology grant-funded regional awareness campaign, Puget Sound Starts Here (PSSH) as a foundation upon which jurisdictions can build more specific behavior-change programs. ● The City implemented the PSSH Don't Wait to Inflate tire care campaign. This campaign was funded through STORM and expanded in 2024 to include transcreated outreach resources for non-English speaking communities. The City's participation included digital ads at gas pumps (in English, Spanish, and Tagalog), stickers handed out at events, and "Don't Wait to Inflate" promotional ads shared on social media platforms. ● The City is a member of the Regional Environmental Education Partnership (REEP), which is an interlocal agreement (ILA) between Thurston County and the cities of Lacey, Olympia and Tumwater. Per this agreement, Lacey pays 27% of the direct and indirect costs of REEP activities. ● Since 1990, the City has participated in the regional Stream Team Program as a tool for outreach to local businesses and residents. Stream Team is jointly funded by the storm and surface water utilities of the cities of Lacey, Olympia, and Tumwater, and Thurston County. Stream Team involves citizens in the protection and enhancement of our local water resources through education and action. Citizens learn about water quality through field training and can then give back to the community through action projects. ● Programs offered through REEP and Stream Team include: Amphibian Monitoring: In partnership with USFWS and WDFW, Stream Team hosted an in-person lecture discussing the various amphibians who live in Thurston County. Participants explored how these different species live, what kinds of habitat they use, and how stormwater impacts their habitats. In Lacey, volunteers helped collect presence/absence data from Pleasant Glade Pond during spawning season. Habitat at Home: In partnership with WDFW, Stream Team and the City hosted a workshop that introduced people to concepts of native plants and habitat building in their backyards. Participants learned about best practices for installation of native plants, maintenance guidelines, and how habitat impacts surface water quality. They also got to take home several native plants and plans for implementing practices learned in the workshop. Stream Bug Monitoring: The City hosted volunteer events for in-stream monitoring for benthic index of biotic integrity (BIBI). Local streams were used to teach proper scientific collection practices, and samples were submitted for lab analysis. Results are reported and recorded in Washington database Puget Sound Stream Benthos.	● Develop materials for one new target audience and one new subject area annually. ● Develop PCB educational and workshop materials. ● Review and develop public education and outreach materials and Standard Operating Procedures (SOPs) to assess both publicly-owned and privately-owned buildings for PCB-containing materials, and to educate contractors/building owners on the new requirements for pressure washing and demolition/renovation. ● Implement new or modify existing education and outreach activities, continue to track activities and monitor success. ● Develop strategy and schedule and begin broadscale implementation of behavior change for selected priority audience(s) and behavior(s).	● Develop quarterly public stormwater and water resource protection workshops. ● Continue collaboration with other jurisdictions to identify new priority audiences/ BMPs and program evaluation techniques.

Table A-2 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Public Education and Outreach.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.2. – Public Education and Outreach (continued)	• Additional programs offered through REEP and Stream Team include: Marine Creature Mondays: In partnership with Boston Harbor Marina and The Estuarium, Stream Team hosted 8 distinct hands-on science events. Each event featured scientific divers collecting marine invertebrates, marine biologists talking about the creatures and how they live in Puget Sound, and information tying stormwater pollution prevention to habitat preservation. Each event hosted between 30-40 people on the docks at Boston Harbor Marina. Develop a series of short form videos to highlight the different stormwater management programs. The City filmed and will be sharing the first two videos, which cover operations and maintenance. The videos highlight our street sweeping program and catch basin cleaning. These will be shared on social media platforms and on Stream Team's website. South Sound Global Rivers Environmental Education Network (GREEN) is a place-based learning program that engages students through field and classroom studies focused on stormwater and non-point source pollution. The program is funded by local jurisdictions and grants. The South Sound GREEN coordinator works with local teachers to instruct students using a well-rounded curriculum aimed at many levels of watershed protection and understanding. The City provides time and resources to support South Sound Green in their efforts. The City signed a 5-year agreement in 2020 to continue to participate in this program and contribute $18,720 annually. A new 5-year agreement which will begin in 2026 is currently in draft and will be finalized by end of 2025. The City participates in various public outreach events to reach different audiences, increase stormwater awareness and encourage best management practices as they relate to stormwater pollution and runoff. In 2024, the City hosted or attended 7 major public outreach events and engaged in meaningful encounters with over 2,000 people who played stormwater pollution games, created arts and crafts, received pet waste bag leash dispensers, and talked to staff about stormwater pollution. Examples of such events include Lacey Fun Fair, Children's Day, MLK Day of Service, Squaxin Island Tribe's Festival of the Steh-Chass, and more. Educational materials focused on landscaping best practices are available at City Hall and on the City's and Stream Team's websites. Bookmarks with information about the "Grow Smart Grow Safe" website are distributed with outdoor water conservation materials, and information is shared via Stream Team newsletters and website. To prevent polluted runoff from charity car washes, the City, in coordination with other local jurisdictions, implemented a Clean Cars, Clean Streams Program. Information about alternatives to home car washing includes a banner over College Street, promotional materials at events, and social media posts. From 2025 workshop: • The City's primary focus for water quality protection focuses on addressing stormwater impacts in Woodland Creek and its surrounding watersheds. • The City coordinates stormwater education and outreach through multiple departments, including Water Resources; Parks, Culture, and Recreation (Parks); and Community and Economic Development. • The City participates in REEP, along with the cities of Olympia and Tumwater and Thurston County. Approximately 60% of the education and outreach done in the City of Lacey is implemented through this ILA, which directs resources to region-wide hands-on science, stormwater education, and stewardship events. • The City conducts general public outreach events including habitat restoration events in city parks where volunteers remove invasive species and engage in riparian restoration activities. • The City also engages with the general public through materials like flyers and door hangers that promote pollution prevention, litter management, and stormwater impacts; these materials are distributed at local events and digitally through the Stream Team website. • The City provides field trip and classroom opportunities to children in the North Thurston School District through the South Sound Green ILA program with Thurston County.	See summary in previous row: S5.C.2. – Public Education and Outreach	

Table A-2 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Public Education and Outreach.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.2.a.ii –Public Education and Outreach - Behavior Change "ii. Behavior change. To affect behavior change, Permittees shall select, at a minimum, one priority audience and one BMP. (a) Priority Audiences: Residents, landscapers, property managers/owners, developers, school age children, college/university, trade students, or businesses (including homebased or mobile businesses). BMPs: Use and storage of: pesticides, fertilizers, and/or household chemicals. Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials. Prevention of illicit discharges. Yard care techniques protective of water quality. Carpet cleaning. Repair and maintenance BMPs for: vehicles, equipment, and/or home/buildings. Pet waste management and disposal. LID Principles and LID BMPs. Stormwater facility maintenance, including LID facilities. Dumpster and trash compactor maintenance. Litter and debris prevention. Sediment and erosion control. (Audience specific) Source control BMPs (refer to S5.C.8). (Audience specific) Locally important, municipal stormwater related subject area." "(b) Social marketing campaign development. Based on the recommendation from 2024 evaluation and report, no later than July 1, 2025, each Permittee shall follow social marketing practices and methods and develop a campaign that is tailored to the community, including development of a program evaluation plan. Each Permittee shall: 1. Develop a strategy and schedule to implement the existing campaign more effectively; or 2. Develop a strategy and schedule to expand the existing campaign to a new priority audience or BMPs; or 3. Develop a strategy and schedule for a new priority audience and BMP behavior change campaign." "(c) Behavior change campaign implementation. No later than September 1, 2025, begin to implement the strategy developed in S5.C.2.a.ii.(b). (d) Behavior change campaign evaluation. No later than March 31, 2029, evaluate and submit report on: 1. The changes in understanding and adoption of behaviors resulting from the implementation of the strategy; and 2. Any planned or recommended changes to the campaign to be more effective; describe the strategies and process to achieve the results." "(e) Behavior change campaign adaptive management. Permittees shall use results of the evaluation to continue to direct effective methods and implementation of the ongoing behavior change program."	From 2025 SWMP Plan: ● The City has created programs to inform and involve the public on many different topics. The goal of the programs is adoption of desired behaviors and reduction of pollution to the maximum extent practicable: Pet Waste Program: The City provides free pet waste stations (signage and bag dispensers) to HOAs, apartment complexes, neighborhoods, and relevant businesses. Participants agree to maintain the stations and keep them stocked. In 2024, seven new stations were installed, and follow-up surveys conducted six months later showed residents observed less pet waste in public areas and viewed the stations as a valuable addition to the community. Based on this positive feedback, the program will continue. Additionally, more than 500 "Bags on Board" portable waste bag dispensers were distributed at community events, especially in green spaces where pet activity is high. Recipients sign a Pet Waste Pledge committing to proper pet waste disposal. Dumpster Lid Campaign: An evaluation of the previous dumpster lid campaign (2019–2023) found that implementation data was largely unavailable due to staff turnover. A 2023 field assessment, however, identified key outreach gaps: Low awareness among businesses of how stormwater is affected by their practices Shared dumpster use created accountability challenges Educational materials were needed in multiple languages As a result, the campaign was absorbed into the City's source control inspection program that launched in 2024. A full-time staff member now leads business-focused pollution prevention outreach and inspection efforts. From 2025 workshop: ● Limited data is available on the previous (2023-2024) behavior change campaign because it occurred during the hiring of a new Water Resource Specialist. This campaign was tied into the source control program. ● Beginning in May 2025, the City joined the Adopt-a-Drain campaign to reach residents with litter and debris prevention. This effort will be in collaboration with a number of other Puget Sound municipalities who have successfully launched this campaign during the previous permit cycle (2019-2024). Hamline University is the onboarding sponsor for this. Finalize strategy and schedule of behavior change campaign July 1, 2025. Implementation of campaign beginning September 2025, will include branding Adopt a Drain materials for the City, offering materials and program sign-up at events, and advertising the program on the City's social media platforms. Personal communication with Ali Brown (2025): ● The City is leading the update of Stream Team's Online Learning Library	● The 2024-2029 Phase II Permit requirements have been met ● Evaluate the effectiveness of the City's ongoing source control behavior change campaign prior to July 1, 2030 (expected to be required under S5.C.2.a.ii of the 2029-2034 Permit) ● Develop a behavior change evaluation report to submit with the 2029 Annual Report ● Evaluate the effectiveness of the behavior change campaign and adjust as needed	● Tailor the Adopt-a-Drain program to be relevant to City residents and businesses ● Conduct public education and outreach on implementation of the updated Stormwater Design Manual ● Develop an overburdened community pet waste program

Table A-2 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Public Education and Outreach.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.2.a.iii – Stewardship. "iii. Stewardship. Each Permittee shall provide, partner with, or promote stewardship opportunities to encourage residents or businesses to participate in activities or events planned and organized within the community, such as: stream teams, storm drain marking, volunteer monitoring, riparian plantings, and watershed habitat improvement. Permittees may provide, partner with, or promote stewardship opportunities created or organized by existing organizations (including non-Permittees)."	From 2025 SWMP Plan: ● The City provides meaningful stewardship opportunities for community members to support stormwater awareness, pollution prevention, habitat restoration, and salmon conservation. A major focus is the Woodland Creek corridor, which is fully protected within city limits through the enforcement of 200-foot riparian buffers and the acquisition of land for the future Greg Cuoio Park. Many volunteer events at Woodland Creek Community Park (WCCP) center on maintaining this buffer through activities like invasive species removal, mulching, and benthic macroinvertebrate sampling. ● Key 2024 Highlights: o Stream Team volunteers contributed 859 hours in Lacey and over 4,000 hours county-wide on habitat restoration, stream monitoring, and storm drain marking. o South Sound GREEN engaged 17 teachers and 395 students in local restoration projects. o Lacey coordinated stormwater-focused volunteer projects with local nonprofit groups, involving college classes, youth organizations, church groups, and military troops. From 2025 workshop: ● Existing stewardship opportunities are focused on supporting Parks; future goals include identifying riparian areas and other critical habitat areas to host stewardship events. ● Four new stormwater workshops will be held in 2025, launching with the Habitat at Home Workshop on February 15, 2025. Quarterly workshops will address subjects pertaining to private stormwater facility maintenance, vegetation maintenance and alternatives, water conservation, business pollution prevention topics, and more. ● The first workshop (February 15, 2025) will be coordinated with WA Department of Fish and Wildlife and regional partners – each jurisdiction included in the ILA hosts their own workshop with specific target audience ● The City of Lacey is targeting residential community members ● The City of Yelm is targeting rural community members ● Other workshops will target multifamily dwellings and apartments From personal communication with Ali Brown (2025): ● 2025 Volunteer Events Facilitated by Lacey: o MLK Day of Service – 21 volunteers o Native Plant Giveaway (with Friendly Flower Garden Club) – 9 volunteers, more than 1000 native plants given away o Earth Day – 46 volunteers at Woodland Creek Community Park o Benthic Monitoring at Woodland Creek Community Park – 4 volunteers o Benthic Monitoring at Thompson Creek – 6 volunteers o Riparian Restoration with College Groups from St. Martin's and South Puget Sound Community College	● The 2024-2029 Permit requirements have been met ● Continue to host, promote, and advertise stewardship activities	● Continue to coordinate with Parks on stewardship events ● Identify additional riparian areas in need of restoration (planting, invasive removal, erosion control) to expand stewardship opportunities (including at Greg Cuoio Park)

Table A-3. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Public Involvement and Participation.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.3.a – Public involvement and participation "Permittees shall provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. Each Permittee shall comply with applicable state and local public notice requirements when developing elements of the SWMP and SMAP. The minimum performance measures are: a. Permittees shall create opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation, and update of the Permittee's SMAP and SWMP. Permittees shall document specific outreach measures for overburdened communities. i. Annually, document specific public involvement and participation opportunities provided to overburdened communities and specifically, highly impacted communities. ii. No later than December 31, 2026, document methods used to identify overburdened communities."	From 2025 Stormwater Management Program Plan (SWMP Plan): • The City's Planning Commission is composed of nine members—seven who reside within city limits and two who may live within the Urban Growth Area (UGA). The Commission provides recommendations on long-range planning goals and policies for the City, including areas outside the city that may seek annexation. Meetings are open to the public, and agendas are posted on the City's website, offering regular opportunities for community members to stay informed and participate in the planning process. • In 2024, Water Resources staff began the process of updating the Stormwater Comprehensive Plan (SCP), which will guide the activities and priorities of the City's Storm and Surface Water Utility. A public outreach campaign is scheduled for fall and winter 2025 to encourage residents to review and provide feedback on the draft SCP. Outreach and engagement will be conducted through a variety of platforms and e-mail lists (summarized below). The Planning Commission will also be involved in this process. • Water Resources staff have begun researching available data to identify overburdened and highly impacted communities within its jurisdiction. This includes using the Washington Environmental Health Disparities Map, the Washington State Department of Health Equity website, and reaching out to the Thurston County Economic Development Council for additional data support. Once these communities are identified, Lacey will provide opportunities for involvement in the SCP update, the implementation and updates to the SWMP, and upcoming rate-structure studies. Future activities planned for 2025 include: Outreach to identified overburdened and highly impacted communities for participation in SCP, SWMP, and rate structure planning Presentation of stormwater program elements to WRIA 13 in collaboration with Olympia, Tumwater, and Thurston County (Fall 2025) Hosting a public open house to share information about Lacey's SWMP and encourage community involvement	• Continue to provide opportunities for public input, including overburdened communities, on the City's stormwater website related to the SWMP Plan and Stormwater Management Action Plan (SMAP) • Continue to document methods used to identify overburdened communities • Develop an outreach program to further engage overburdened communities	• Host a yearly open house to discuss the City's SWMP Plan, SMAP, and SMED program and projects
S5.C.3.b – Post the SWMP Plan and annual report on City's website "b. Each Permittee shall post on their website their SWMP Plan and the Annual Report required under S9.A no later than May 31 each year. All other submittals must be available to the public upon request."	From 2025 SWMP Plan: • The most recent version of the SWMP Plan and Annual Compliance Report are posted on the City's website at the following link: https://cityoflacey.org/resource_library/stormwater-utility/ • The documents are updated on the website as needed, at least annually. Comments on the SWMP Plan will be considered, and subsequent editions of the documents will incorporate any appropriate suggestions. In this way, the SWMP Plan will be a perpetual "work in progress" as it integrates revisions spawned in part by public comment, as well as new program components and progress toward program goals. From 2025 workshops: • The City's website provides information on all stormwater programs and resources for the community, along with the annual report, stormwater design manual, SWMP Plan and other important documents. The overall City website is difficult to navigate, and staff time committed to implementing updates to it is very limited as the website is only managed by one person.	• Continue to post the updated SWMP Plan and Annual Report on the City's website	• Update the Stormwater and Stormwater Utility webpages on the City's website using user experience (UX) principles

Table A-4. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: MS4 Mapping and Documentation.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.4.a – Ongoing mapping requirements "a. The SWMP shall include an ongoing program for mapping and documenting the MS4. The minimum performance measures are: i. Known MS4 outfalls and known MS4 discharge points. (a) Map outfall size and material, where known. ii. Receiving waters, other than groundwater. iii. Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee. iv. Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters. v. Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following features or attributes (or both) shall be mapped: (a) Tributary conveyance type, material, and size where known. (b) Associated drainage areas. (c) Land use. vi. Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities. vii. All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007. viii. All known connections from the MS4 to a privately owned stormwater system."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● During the current (2024) reporting period, the city's stormwater system mapping in the City's GIS system has been ongoing. New development, redevelopment, and transportation projects are mapped as they are completed. ● In the fall of 2024, Lacey Water Resources went through the stormwater GIS data to update ownership of stormwater facilities in anticipation of the new compliance software that was implemented in January 2025. ● Water Resources staff visited every outfall on the previously submitted list to ensure they are truly "outfalls," that the size and material were correct, and to clear vegetation for the mapping of the outfalls scheduled in early 2025. From 2025 workshops: ● Older areas of town don't have as-builts. As inspections are done, there is a step to get these into GIS but there are still many areas not in GIS. Personal correspondence with Royce Young (2025): ● Water Resources and Land Survey Section staff have mapped the x, y & z coordinates of all known outfalls inside Lacey city limits.	● Continue to maintain and update the City's MS4-related mapping data on an ongoing basis	● Continue to develop a defined schema for infrastructure data stored in GIS ● Hire an intern to support stormwater GIS updates in older areas of the city ● Evaluate using a drone to support ongoing mapping

Table A-4 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: MS4 Mapping and Documentation.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.4.b – New mapping requirements "Each Permittee shall: i. No later than March 31, 2026, submit locations of all known MS4 outfalls according to the standard templates and format provided in the Annual Report. Report the size and material of the outfalls, where known. ii. No later than December 31, 2026, using available, existing data, map tree canopy to support stormwater management on Permittee-owned or operated properties. Permittees shall develop and follow a methodology to intentionally identify canopy for stormwater management purposes, which may be updated annually or as needed. iii. No later than March 31, 2028, implement a methodology to map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee. Submit with the March 31, 2028 Annual Report a map(s) (.pdf) and table (.xlsx) with a breakdown of the MS4 tributary basins quantifying estimated acres managed or unmanaged by stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee. iv. No later than December 31, 2028, using available, existing data map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on Permittee-owned or operated properties."	From 2025 workshops: ● Water Resources staff are in the process of gathering all available and existing data on the City's tree canopy. This includes previously mapped tree canopy (2020), land cover data provided by local state agencies, i-Tree, United States Department of Agriculture (USDA) tree canopy cover datasets, Tree Equity Score National Explorer, and the Interactive World Forest Map. ● The Economic Development Council is in the process of helping identify overburdened neighborhoods for the City. Once the map has been developed, this information will be integrated into the City's geodatabase. Personal correspondence with Royce Young (2025): ● The City purchased tree canopy data from NearMap in June 2025. ● The City has also created an equity map, which includes overburdened communities. ● The City will be researching land cover data from the Nature Conservancy's Stormwater Heatmap	● Map tree canopy to support stormwater management on City-owned or operated properties by December 31, 2026 ● Implement a methodology to map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have stormwater treatment and flow control BMPs/facilities owned or operated by the City and submit it in the 2028 Annual Report ● Continue to update outfall mapping information as needed. ● Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on City-owned or operated properties by December 31, 2026	● Apply for a Department of Natural Resources (DNR) grant to perform an additional tree canopy assessment

Table A-4 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: MS4 Mapping and Documentation.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.4.c - e – Record Keeping "c. The required format for mapping is electronic (e.g. Geographic Information System, CAD drawings, or other software that can map and store points, lines, polygons, and associated attributes), with fully described mapping standards." "d. To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology, upon request, available maps depicting the information required in S5.C.4.a through c, above." "e. Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally recognized Indian Tribes, municipalities, and other Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally recognized Indian Tribes, municipalities, and other Permittees."	From 2025 workshops: ● The City does not have a Standard Operating Procedure (SOP) for mapping and mapping updates. Once the development is completed and punch list items have been fixed, Jake Sutton (Utility Mapper) enters the utilities by georeferencing the plans and adding them in. This approach can cause the utilities to be slightly off in location. ● The City has a defined schema for infrastructure data stored in GIS and other formats.	● Continue to maintain electronic maps and corresponding data attributes	● Develop an SOP for mapping and mapping updates

Table A-5. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.5 – Illicit Discharge Detection and Elimination "The SWMP shall include an ongoing program designed to prohibit, prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4. The minimum performance measures are: a. The program shall include procedures for reporting and correcting or removing illicit connections, spills, and other illicit discharges when they are suspected or identified. The program shall also include procedures for addressing pollutants entering the MS4 from an interconnected, adjoining MS4. Illicit connections and illicit discharges shall be identified through, but not limited to, field screening, inspections, complaints/reports, construction inspections, maintenance inspections, source control inspections, and/or monitoring information, as appropriate." b. Permittees shall inform public employees, businesses, and the public of hazards associated with illicit discharges and improper disposal of waste."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● The City currently maintains a stormwater infrastructure map in electronic format, as noted in Section S5.C.4 – MS4 Mapping and Documentation. Among the many uses of system mapping is the ability to trace potential flow paths of contaminants from illicit discharges in the municipal storm sewer system (MS4). From 2024 Annual Report: ● The City has conducted education and outreach on the prevention of illicit discharges, water quality, and best management practices (BMPs)/illegal dumping during stormwater inspections of private facilities, source control inspections, and during an Environmental Reports Tracking System (ERTS) response. ● The City has a spill response number shared on many outlets, including the City and Stream Team websites, social media (Facebook & X), magnets handed out at events, and in any educational materials handed out as a response to an illicit discharge report. ● The City uses 311 so residents can report IDDE incidents immediately. ● The City writes articles about pollution prevention in the quarterly Stream Team newsletter and participates in the yearly Puget Sound Starts Here campaign. Personal correspondence with Royce Young (2025): ● Educational materials are also handed out during source control inspections.	● Continue to provide information regarding the City's pollution prevention and control resources, including methods for reporting spills, illicit discharges, and illicit connections.	● None

Table A-5 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.5.c – Illicit discharge ordinance "Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to the maximum extent allowable under state and federal law. The ordinance or other regulatory mechanism in effect as of the effective date of this Permit shall be revised, if necessary, to meet the requirements of this Section no later than July 1, 2027. i. Allowable Discharges: The regulatory mechanism does not need to prohibit the following categories of non-stormwater discharges: (a) Diverted stream flows (b) Rising groundwaters (c) Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20)) (d) Uncontaminated pumped groundwater (e) Foundation drains (f) Air conditioning condensation (g) Irrigation water from agricultural sources that is commingled with urban stormwater (h) Springs (i) Uncontaminated water from crawl space pumps (j) Footing drains (k) Flows from riparian habitats and wetlands (l) Non-stormwater discharges authorized by another NPDES or State Waste Discharge permit (m) Non-stormwater discharges from emergency firefighting activities in accordance with S2 Authorized Discharges ii. Conditionally allowable discharges: The regulatory mechanism may allow the following categories of non-stormwater discharges only if the stated conditions are met: (a) Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water… (b) Discharges from lawn watering and other irrigation runoff, including from reclaimed water sources… (c) Discharges from swimming pools, spas, and hot tubs… (d) Street and sidewalk wash water and water used to control dust… (e) Routine external building washdown that does not use detergents for buildings built or renovated before 1950 and after 1980… (f) Other non-stormwater discharges. The discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee which addresses control of such discharges. iv. The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions."	From 2025 SWMP Plan: ● Ordinances No. 791 and No. 1233 have been in place for many years prohibiting the discharge of pollutants into the City's stormwater system. o Ordinance No. 1332 (2009) updated these existing ordinances to reflect the new requirements of the original Phase II Permit. o Discharges of waste to natural outlets is prohibited under Lacey Municipal Code Title 13, Water and Sewage, Chapter 13.08 (Use of Sewers – Private Sewage Disposal). o Under Lacey Municipal Code (LMC) 13.08.015, discharging polluting elements into the stormwater system is unlawful and subject to a fine of up to $5,000. ● The purpose of these ordinances is to protect the receiving waters of the stormwater system. ● On December 21, 2017, the City of Lacey adopted Ordinance 1525, which added Chapter 14.27 Stormwater Management and Chapter 14.29 Illicit Discharges to the LMC. ● On June 1, 2023, the City of Lacey adopted Ordinance 1638, which amended Chapter 14.29 to have consistency in definitions and for compliance with the new Source Control program described in Section S5.C.8 of the Phase II Permit.	● Review and update the LMC to reflect the new requirements prohibiting washdown water from buildings containing PCB materials and post-emergency clean-up procedures.	● None

Table A-5 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.5.d – "Ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the Permittee's MS4. The program shall include the following components: i. Procedures for conducting investigations of the Permittee's MS4, including field screening and methods for identifying potential sources. These procedures may also include source control inspections. The Permittee shall implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections must be conducted using Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual (Herrera Environmental Consultants, Inc; May 2020), or another methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the Annual Report. (a) All Permittees shall complete field screening for an **average of 12%** of the MS4 each year."	From 2025 SWMP Plan: ● Pollutant sources are tracked through long-term monitoring of surface and ground waters. Identified pollution sources that degrade water quality have been incorporated as priorities for capital improvement projects and mitigation efforts. ● City staff look for illicit connections during catch basin cleaning, source control inspections, and illicit discharge responses. Once an illicit connection is detected, an investigation is conducted to determine where the connection is coming from. City staff then work with owners of the illicit connection to disconnect the illicit connection in the 6-month time frame From 2025 workshop: ● The City implements the following types of field screening: o Catch basin/manhole inspections if flow is present. o Outfall inspections during the dry period o The City implements the field screening methodologies included in the 2020 Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual ● The City uses NPDESPro to document field screening observations	● Continue field screening for illicit connections and illicit discharges	● Further develop and implement a stormwater outfall illicit discharge screening program
S5.C.5.d – Ongoing program (hotline) "ii. A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges."	From 2025 SWMP Plan: ● The City has provided two ways for citizens to report spills. Under the City's contacts page, the Report a Spill number and email have been provided (https://cityoflacey.org/contact/). ● Citizens can also report a spill under the LaceyWorks-Request a Service page (https://laceywa.qscend.com/311/). ● The City's Street/Storm Maintenance Division responds to stormwater-related emergencies, primarily chemical spills and flooding events. ● Local police and fire authorities contact the Street/Storm Maintenance Division for flooding and spill events occurring within current city limits.	● Continue to implement spill hotline and online reporting form	● None

Table A-5 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.5.d – Ongoing program (training) "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."	From 2025 SWMP Plan: ● All field staff in every department of the city and the Lacey Police Department receives training on the City's IDDE Program. Refresher training is provided annually as needed. From 2024 Annual Report: ● Illicit Discharge training was provided to 58 field staff in 2024. ● Staff are trained to recognize what an illicit discharge is, the important things to note for reporting the discharge, and who to report the discharge to. ● The City's spill response staff or the Illicit Discharge coordinator will respond to the illicit discharge. o If the illicit discharge is on public property or in the right-of-way, spill response staff will clean up the discharge using various means, such as absorbent pads, dry sweep, or a vactor truck. o If the illicit discharge is on private property, the Illicit Discharge Coordinator will work with the property owner to get the spill cleaned up by providing list of contractors or a small spill kit. • Spill investigations on private property are not closed out until the spill has been cleaned up and does not impact the City's MS4.	● Continue to implement staff training program ● Continue to implement the IDDE training for the Lacey Police Department ● Work with the City's Street/Storm Maintenance Division and Community and Economic Development departments to develop post-emergency clean-up procedures ● Continue to work with Lacey Fire District 3 to developing procedures for clean-up	● None
S5.C.3.e – Ongoing program (implementation to address illicit discharges) "e. Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's MS4. The program shall include: i. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge. ii. Procedures for the post-emergency clean-up of firefighting activities: (a) No later than December 31, 2026, the Permittee shall coordinate with firefighting agencies/departments that serve the areas that discharge to the MS4 to be notified when PFAS-containing AFFFs are used during emergency firefighting activities. (b) No later than January 1, 2027, Permittee shall update and implement procedures to minimize discharges to the MS4 during post-emergency clean-up and disposal activities including, but not limited to, the immediate clean-up in all situations where PFAS-containing AFFFs have been used, diversions, and other measures that prevent discharges to the MS4. The Permittee is not expected to deploy control measures during an emergency. iii. Procedures for tracing the source of an illicit discharge; including visual inspections and, when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures. iv. Procedures for eliminating the discharge including notification of appropriate authorities (including owners or operators of interconnected MS4s), notification of the property owner, technical assistance, follow-up inspections, and use of the compliance strategy developed pursuant to S5.C.5.c.iv, including escalating enforcement and legal actions if the discharge is not eliminated."	From 2025 SWMP Plan: ● The City's Street/Storm Maintenance Division responds to stormwater-related emergencies, primarily chemical spills and flooding events. In either situation, the Street/Storm Maintenance Division priorities are to protect human life, groundwater, the environment, and property, in that order. ● Local police and fire authorities contact the Street/Storm Maintenance Division for flooding and spill events occurring within current city limits. Personal correspondence with Royce Young (2025): ● Trained City personnel address hazardous material spills smaller than five gallons. ● When hazardous material spills are larger than five gallons, the City will work with the Fire Department and Ecology to address the spills. ● The City ensures all spills are cleaned up regardless if they are on public or private property. o The City's IDDE Coordinator works with the property owner to clean up spills on private property.	● Continue to respond to spills and water quality complaints ● Continue tracking the number of illicit discharges, illicit connections, and spills	● Review and revise upstream illicit discharge source control programs to respond to illicit discharges found and/or reported ● Develop an illicit discharge enforcement SOP

Table A-5 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.3.e – Ongoing program (implementation to address illicit discharges) (continued) "v. Compliance with the provisions in (i)-(iv) above shall be achieved by meeting the following timelines: (a) Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3. (b) Investigate (or refer to the appropriate agency with the authority to act) within 7 days, on average, any complaints, reports, or monitoring information that indicates a potential illicit discharge. (c) Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection. (d) Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated	From 2024 Annual Report: ● Depending on who was responsible for the discharge and what type/size the discharge is, the spill is either cleaned up and eliminated by City staff or the City ensures the responsible party takes corrective action to eliminate and clean up the illicit discharge.	See summary in previous row: S5.C.5.e– Ongoing program (implementation to address illicit discharges)	
S5.C.5.f – Ongoing staff training program for IDDE "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."	From 2024 Annual Report: ● IDDE staff are trained to implement the field screening and source tracing methodologies provided in the 2020 Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual. ● All City spill response staff attended the illicit discharge training put on by CWT Academy at the Washington Stormwater Center's Stormwater Week. From 2025 workshop: ● Training occurs at least once every 5 years or if there is a change in procedures or ordinance.	● Continue to implement staff training program	● None

Table A-5 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Illicit Discharge Detection and Elimination.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.5.g – Track and maintain records "g. Recordkeeping: Permittees shall track and maintain records of the activities conducted to meet the requirements of this section. In the Annual Report, each permittee shall submit data for all of the illicit discharges, including spills and illicit connections that were found by, reported to, or investigated by the Permittee during the previous calendar year. The data shall include the information specified in Appendix 13 and WQWebIDDE. Each Permittee may either use their own system or WQWebIDDE for recording this data."	From 2025 SWMP Plan: ● Stormwater personnel document incidents of emergency response using the City's Naviline Data Management system. The data helps City staff track problem flood areas and identify sources of spills to prevent future occurrences or contamination. ● The City is required to notify the Ecology Spill Response Team so that Ecology can track spills and ensure that they are properly addressed. Spill data is included in the annual report submittal to Ecology From 2024 Annual Report: ● An annual report attachment details all of the illicit discharges and illicit connections that were reported and inspected and the actions taken in response during the calendar year of 2024.	● Continue to report illicit discharge data to Ecology ● Summarize annual activities for the IDDE component of the Annual Report, including updates to the SWMP Plan	● None

Table A-6. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Controlling Runoff from New Development, Redevelopment, and Construction Sites.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.6.a-b – Ordinance or other enforceable mechanism that addresses runoff from development, redevelopment, and construction sites. "Each Permittee shall implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment, and construction site activities. The program shall apply to private and public development, including transportation projects. The minimum performance measures are: a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Each Permittee shall adopt and make effective a local program, no later than June 30, 2027, that meets the requirements of S5.C.6.b(i) through (iii), below, and shall apply to all applications submitted: i. On or after July 1, 2027. ii. Prior to January 1, 2017, that have not started construction by July 1, 2022. iii. Prior to July 1, 2022, that have not started construction by July 1, 2027. iv. Prior to July 1, 2027, that have not started construction by July 1, 2032 b. The ordinance or other enforceable mechanism shall include, at a minimum: i. The Minimum Requirements, thresholds, and definitions in Appendix 1, or the 2013 Appendix 1 amended to include the changes identified in Appendix 10, or Phase I program approved by Ecology and amended to include Appendix 10, for new development, redevelopment, and construction sites. Adjustment and exceptions criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of Ecology-approved basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1. ii. The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2019 Phase I Permit) will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under Chapter 90.48 RCW to apply AKART prior to discharge: (a) Site planning requirements (b) BMP selection criteria (c) BMP design criteria (d) BMP infeasibility criteria (e) LID competing needs criteria (f) BMP limitations Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State AKART requirements. Permittees who choose to use the requirements, limitations, and criteria, above, in the Stormwater Management Manual for Western Washington, or a Phase I program approved by Ecology, may cite this choice as their sole documentation to meet this requirement. iii. The legal authority, through the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this section that discharge to the Permittee's MS4."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● The City has developed and implemented a program to reduce pollutants in stormwater runoff to the municipal separate storm system from new development, redevelopment, and construction site activities. ● The City enforces this program through the City of Lacey Stormwater Design Manual (SDM). The 2016 SDM was a complete update of the previous 2010 SDM. Lacey's 2016 SDM is based on Pierce County's 2015 Stormwater Management and Site Development Manual, which is an approved equivalent to the Washington State Department of Ecology (Ecology) 2012 Stormwater Management Manual for Western Washington, amended in December 2014. The 2016 SDM was updated in 2020-2022, in accordance with the Phase II Permit requirements and Ecology's updated 2019 SWMMWW. The 2022 SDM was adopted under Ordinance 1620 on June 16, 2022, and effective as of July 1, 2022. Throughout the last 3 years, the City has gathered feedback from different departments that will be incorporated in the 2027 SDM update. ● In 2017, the City adopted Ordinance 1525 to update necessary development-related codes, rules, standards, and other enforceable documents to meet Permit requirements, including the addition of two new stormwater-related chapters to the Lacey Municipal Code (LMC). ● The City transitioned from conveying stormwater off-site to requiring on-site infiltration and control to the maximum extent feasible. ● Lacey participated in the 2006 LID Local Regulation Assistance Project to improve clarity and feasibility of LID regulations.	● Update the City's SDM to incorporate and adopt the required updates from Ecology's 2024 SWMMWW by June 30, 2027 ● Update the City's SDM to incorporate and adopt the required updates from Ecology's 2029 SWMMWW by June 30, 2032 (expected to be required under S5.C.6.b of the 2029-2034 Permit)	● Evaluate incorporating additional (i.e., not required) updates from Ecology's 2024 SWMMWW into the City's SDM ● Evaluate the need to revise monetary penalties for stormwater violations (e.g., construction, source control, private facility maintenance)

Table A-6 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Controlling Runoff from New Development, Redevelopment, and Construction Sites.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.6.c – Permitting process with site plan review, inspection, and enforcement "c. The program shall include a permitting process with site plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in Definitions and Acronyms). At a minimum, this program shall be applied to all sites that meet the minimum thresholds adopted pursuant to S5.C.6.b.i, above. i. Review of all stormwater site plans for proposed development activities. "ii. Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage Potential. As an alternative to evaluating each site according to Appendix 7, Permittees may choose to inspect all construction sites that meet the minimum thresholds adopted pursuant to S5.C.6.b.i, above." "iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection. iv. Each Permittee shall manage maintenance activities to inspect all stormwater treatment and flow control BMPs/facilities, and catch basins, in new residential developments at least twice per 12-month period with no less than 4 months between inspections, until 90% of the lots are constructed (or when construction has stopped and the site is fully stabilized), to identify maintenance needs and enforce compliance with maintenance standards as needed. v. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Verify that a maintenance plan is completed and responsibility for maintenance is assigned for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection. vi. Compliance with the inspection requirements in (ii) through (iv), above, shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance shall be determined by achieving at least 80% of required inspections annually. The inspections may be combined with other inspections provided they are performed using qualified personnel." vii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained." "viii. An enforcement strategy shall be implemented to respond to issues of non-compliance."	From 2025 SWMP Plan: • The City has several full-time employees whose responsibility is to inspect and enforce development plans, including erosion control compliance. • In 2018, the City added a new position, Stormwater Code Compliance Inspector, to ensure that construction-related erosion and sediment control best management practices (BMPs) are placed and maintained to protect water quality throughout the life of a project. From 2024 Annual Report: • 111 site plans were reviewed during 2024. o Site plans are reviewed at various stages throughout the submittal process. o During land use reviews, the City's Senior Stormwater Engineer reviews the project to ensure the project is meeting all the minimum requirements in Appendix 1. o Once the site has been approved, the civil plans are reviewed by several staff to ensure they contain the appropriate stormwater elements. o After the civil plans have been reviewed, the City reviews the temporary erosion and sediment control plans for proper BMPs and to make sure they obtain their Construction Stormwater General Permit (CSGP). • 67 construction site inspections were conducted in 2024. o Attachment (to annual report) Q48-50 Construction Site Inspections provides details. • Verified that a maintenance plan was completed and responsibility for maintenance was assigned for projects prior to final approval and occupancy being granted. • Zero enforcement actions were in 2024. From 2025 workshop: • The City's preference is to work with contractors/owners using education rather than punishment, unless they have recurring issues or are uncooperative. Personal communication with Royce Young (2025): • The Stormwater Code Compliance Inspector position focuses on private development. • In 2025, the City hired a position for erosion and sediment control for public development (Engineering Technician 3).	• Continue to implement stormwater plan review • Continue to implement preconstruction erosion and sediment control inspections • Continue to refine and improve enforcement procedures to ensure proper installation and maintenance of erosion and sediment control BMPs • Continue to inspect all stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments at least twice per 12-month period • Continue to inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities	• Revise information management systems to track and report construction, new development and redevelopment permits, inspection and enforcement actions and Private Drainage Inspection Program inspections and enforcement actions • Develop standardized plan review, inspection, enforcement and compliance documentation and tracking processes and procedures

Table A-6 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Controlling Runoff from New Development, Redevelopment, and Construction Sites.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.6.d – Notice of Intent copies "d. The program shall make available to representatives of proposed new development and redevelopment, as applicable, the link to the online Construction Stormwater General Permit Notice of Intent (NOI) form for construction activity, a link to the electronic Industrial Stormwater General Permit NOI form for industrial activity, and a link to the online registration requirements for Underground Injection Control (UIC) wells. Permittees shall continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology."	From 2024 Annual Report: ● All new development that meets the criteria are required to apply for coverage under the Ecology's CSGP.	● Continue to support Ecology by providing the "Notice of Intent" (NOI) forms for Construction Activity and Industrial Activity	● None
S5.C.6.e – Ongoing staff training program to control stormwater runoff "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 shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained."	From 2024 Annual Report: ● 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. From 2025 workshop: ● The frequency of site plan review training is seldom. The City has had the same four main reviewers for 20 years, so they are familiar with the review process. ● SDM training is conducted with updates and changes.	● Continue to implement staff training program ● Conduct staff training on implementation of the updated SDM (including implementation of the wet season SWPPP)	● Conduct WWHM, MGSFlood, MODFLOW, MODRET, and other software training for staff who perform modeling as one of their job duties.

Table A-7. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Management for Existing Development.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.7.a – Stormwater Facility Retrofits or Tailored SWMP Actions "Permittees shall implement stormwater facility retrofits, or tailored SWMP actions that meet the criteria described in Appendix 12, using one or a combination of the following: i. Strategic stormwater investments identified in Stormwater Management Action Plan(s) (SMAPs, S5.C.1.d.), or similar stormwater planning process; and/or ii. Opportunistic stormwater investments identified by leveraging projects outside of SMAP areas to improve stormwater management and infrastructure." **Appendix 12 – Stormwater Management for Existing Development Reporting** Project types include: ● Stormwater facility retrofits o New flow control facility o New runoff treatment facility (or treatment and flow control facility) o New LID BMPs o Retrofit of existing treatment and/or flow control facility ● Maintenance with capital construction costs ≥ $25,000 ● Property acquisition for water quality and/or flow control benefits ● Restoration of riparian buffers ● Restoration of forest cover ● Floodplain reconnection projects on water bodies that are not flow control exempt per Appendix 1 ● Permanent removal of impervious surfaces ● Sweeping and line cleaning S5.C.7.b – Annual Report of Planned Projects "With each Annual Report, each Permittee shall provide a list of planned, individual projects scheduled for funding or implementation during this Permit term for the purpose of meeting the assigned equivalent acreage in Appendix 12. This list shall include at a minimum the information and use the formatting specified in Appendix 12 (.xlsx. file format)." **Appendix 12 – Stormwater Management for Existing Development Reporting** "Annual Reporting of projects provides the opportunity to track and report progress. Fill in all values as completely as possible each year. In subsequent years, Permittees should update the values for each project and add projects to new rows, as needed. You may remove projects that are cancelled or otherwise will not be used toward achieving the defined level of effort (as expressed in equivalent acres as shown in Table 1). Projects that were started on or after January 1, 2023, and are fully funded, started construction, completed, or regional collaboration by March 31, 2028, may be included."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● Lacey Water Resources is reviewing their previously submitted SMAP, the stormwater Capital Improvement Program (CIP) projects that have been completed since January 1, 2023, and their 2020 Stormwater Comprehensive Plan (SCP) to determine the acreage of the completed retrofits and what areas of the City to focus on to get the most water quality improvements. ● Lacey Water Resources is in the process of updating their SCP to include new CIPs, many of which are aimed at retrofitting existing stormwater facilities or installing new water quality treatments for areas that currently do not have any treatment. As these projects are developed, the City will be considering the requirements of this permit program as a deciding factor on which projects will be put in the SCP. From 2024 Annual Report: ● The City provided a list of projects that were completed between January 2023 and December 2024. The Annual Report submittal to Ecology also includes information on the City's robust street sweeping program. The City is in the process of updating their SCP, which will guide new projects that meet SMED requirements. The SCP is scheduled to be complete in early 2026 and the City will have an updated spreadsheet with future projects to submit with the 2025 annual report in March 2026. As of March 2025, all previous non completed projects are under review for the SCP update.	● Select a set of strategic stormwater investments identified in the SMAP, stormwater CIP, or opportunistic stormwater investments identified by leveraging projects outside of SMAP areas ● Identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's compliance target of 9.3 equivalent acres ● Continue to identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's future compliance target in the 2029-2034 Permit ● Develop a list of planned projects, update annually, and submit to Ecology with the Annual Report	● None

Table A-7 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Stormwater Management for Existing Development.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.7.c – Implementation of Planned Projects "No later than March 31, 2028, Permittees shall fully fund, start construction, or completely implement project(s) that meet the assigned equivalent acreage and submit documentation with the Annual Report (due on March 31, 2028) as described in Appendix 12. i. Projects that started construction on or after January 1, 2023, may be included towards achieving the acres required. ii. Permittees may contribute to meeting an overall regional goal to satisfy this permit requirement as described in S5.C.7.d. iii. Permittees that completely implement stormwater facility retrofit projects by the expiration date of this Permit that will exceed the area required for this Permit term may apply the excess as a credit to be used for the next Permit term (e.g. 2029-2034 Permit term), not to exceed 50% of the next Permit's requirement. iv. Permittees shall report which projects may provide Tribal benefits and benefits to overburdened communities including specifically Vulnerable Populations and Highly Impacted Communities."	No current activities related to this permit requirement.	• Fully fund, start construction, or completely implement project(s) that manage 9.3 equivalent acres • Submit documentation of achieving the 9.3 equivalent acre target with the 2028 Annual Report	• None
S5.C.7.d – Regional Collaboration "d. Permitees may collaborate to meet a regional goal. i. Each Permittee is required to manage at least 0.5 equivalent acres within their own jurisdiction but may receive acreage credit for contributing to meeting an overall regional goal outside their defined MS4 Permit coverage area. For Permittees assigned 0.5 acres, participation and in-kind services to regional collaboration projects may count as the contribution for this Permit term if there is regional agreement on the strategy. ii. Permittees may contribute to a regional goal, that is the sum of Phase II partners assigned acreage from Appendix 12. Projects may be implemented outside of Permit coverage areas to meet their individual requirement as part of a regional goal where benefits to receiving waters within the Permit coverage areas are identified and anticipated."	Personal correspondence with Royce Young (2025): • The City is participating in the Thurston Regional Planning Council Road Retrofit Study, which includes development of a road retrofit prioritization toolkit to help Thurston County, the cities of Lacey, Olympia, Tumwater, and other stakeholders • identify the best transportation-related stormwater retrofit opportunities.	• Consider coordinating with Thurston County and the Cities of Olympia and Tumwater on stormwater investments to meet regional goals (the City can receive up to 25% of assigned acreage credit from collaborative projects if at least 0.5 equivalent acres are managed within the City).	• None
S5.C.7.e – Planned Projects for the next Permit term (2029-2032) e. Permittees shall report the amount of estimated or projected equivalent acres managed by stormwater facility retrofits for the next Permit term (e.g., 2029-2032). This report shall be submitted to Ecology no later than March 31, 2028."	No current activities related to this permit requirement.	• Report the amount of estimated or projected equivalent acres managed by stormwater facility retrofits, restoration projects, and maintenance activities (e.g., street sweeping and line cleaning) to submit with the 2028 Annual Report	• None

Table A-8. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Source Control Program for Existing Development.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.8 – Source control "The Permittee shall implement a program to prevent and reduce pollutants in runoff from areas of existing development that discharge to the MS4. The program shall include application of source control BMPs, inspections, and enforcement. The minimum performance measures are: Source control ordinance a. Permittees shall enforce ordinance(s), or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities (see Appendix 8 to identify pollutant generating sources). Permittees shall update and make effective the ordinance(s), or other enforceable documents, as necessary to meet the requirement of this Section no later than August 1, 2027. The requirements of this subsection are met by using the source control BMPs in the SWMMWW, or a Phase I Program approved by Ecology. In cases where the manual(s) lack guidance for a specific source of pollutants, the Permittee shall work with the owner/operator to implement or adapt BMPs based on the best professional judgement of the Permittee. Applicable operational source control BMPs shall be required for all pollutant generating sources. Structural source control BMPs, or treatment BMPs/facilities, or both, shall be required for pollutant generating sources if operational source control BMPs do not prevent illicit discharges or violations of surface water, groundwater, or sediment management standards because of inadequate stormwater controls. Implementation of source control requirements may be done through education and technical assistance programs, provided that formal enforcement authority is available to the Permittee and is used as determined necessary by the Permittee, in accordance with S5.C.8.d., below."	From 2023 Stormwater Management Program Plan (SWMP Plan): ● On June 1, 2023, the City of Lacey adopted Ordinance 1638, which amended Chapter 14.29 to have consistency in definitions and for compliance with the new Source Control program described in Section S5.C.8	● Continue to refine and improve escalating enforcement procedures, including roles and responsibilities	● None
S5.C.8.b – Source control inventory "Permittees shall implement a program to identify publicly and privately owned institutional, commercial, and industrial sites which have the potential to generate pollutants to the MS4. Permittees shall update the inventory at least once every 5 years. The inventory shall include: i. Businesses and/or sites identified based on the presence of activities that are pollutant generating (refer to Appendix 8); and ii. Other pollutant generating sources, based on complaint response, such as: home-based businesses and multi-family sites."	From 2025 SWMP Plan: ● Lacey Water Resources purchased the NPDESPro software to help streamline all permit required inspections and to have a centralized location for those records. ● During 2024, the City gathered all inventory and went through their GIS data in preparation of the new software. o The new software was implemented in 2025.	● Continue to update the source control inventory at least once every five years	● None

Table A-8 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Source Control Program for Existing Development.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.8.c.i – Source control inspection program: provision of information "Permittees shall implement an inspection program, performed by qualified personnel, for sites identified pursuant to S5.C.8.a.1., above. i. All identified sites with a business address shall be provided information about activities that may generate pollutants and the source control requirements applicable to those activities. This information shall be provided by mail, telephone, electronic communications, or in person. This information may be provided all at one time or spread out over the Permit term to allow for tailoring and distribution of the information during site inspections."	From 2025 SWMP Plan: ● In June and July 2024, Lacey sent out over 3,000 letters to all businesses in Lacey, regardless of what type of business it was, introducing the source control program. ● The City's source control inspector selected businesses randomly off the inventory spreadsheet, emailed business owners an introductory letter, and asked business owners to contact him. o Once they contacted him, he scheduled an inspection. o During the inspection, the inspector provided a source control brochure and a printout of the BMPs that are applicable to all businesses. o Inspections included discussion about site specific BMPs, illicit discharges, and their stormwater system, if applicable.	● Continue to implement escalating enforcement if sites do not comply with source control program requirements ● Continue to provide information about the source control program to business owners and operators ●	● None
S5.C.8.c.ii - v – Source control inspection program: inspections and reporting "ii. The Permittee shall annually complete the number of inspections equal to 20% of the businesses and/or sites listed in their source control inventory to assess BMP effectiveness and compliance with source control requirements. The Permittee may count follow-up compliance inspections at the same site toward the 20% inspection rate. The Permittee may select which sites to inspect each year and is not required to inspect 100% of sites over a 5-year period. Sites may be prioritized for inspection based on their land use category, potential for pollution generation, proximity to receiving waters, or to address an identified pollution problem within a specific geographic area or sub-basin. iii. Each Permittee shall inspect 100% of sites identified through credible complaints. iv. Permittees may count inspections conducted based on complaints, or when the property owner denies entry, to the 20% inspection rate. v. Annual Reporting of inspections shall be organized by business type or activities with potential to generate pollutants to the MS4. Standard Industrial Code (SIC), Major Group, and NAICS numbers may be provided for reference as noted in Appendix 8."	From 2025 SWMP Plan: ● Lacey Water Resources has a new staff member who manages the source control program. ● Lacey Water Resources has been working with the Finance Department to identify businesses that have a Lacey Business license, or a Lacey endorsement. o Each month the Finance Department sends a list of new/renewed businesses that purchased a Lacey endorsement, those that are physically located within city limits are then added to the source control inventory. ● A total of 650 businesses were inspected in 2024.	● Continue to meet the 20% inspection target for the source control program on an annual basis ● Continue to respond to credible complaints	● None

Table A-8 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Source Control Program for Existing Development.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.8.d – Progressive enforcement policy "Permittees shall implement a progressive enforcement policy that requires that site to comply with stormwater requirements within a reasonable time periods as specified below: i. If the Permittee determines, through inspections or otherwise, that a site has failed to adequately implement required BMPs, the Permittee shall take appropriate follow-up action(s), which may include phone calls, reminder letters, emails, or follow-up inspections. ii. When a Permittee determines that a site has failed to adequately implement BMPs after a follow-up inspection(s) the Permittee shall take enforcement action as established through authority in its municipal codes or ordinances, or through the judicial system. iii. Each Permittee shall maintain records, including documentation of each site visit, inspection reports, warning letters, notices of violations, and other enforcement records demonstrating an effort to bring sites into compliance. Each Permittee shall also maintain records of sites that are not inspected because the property owner denies entry. iv. A Permittee may refer non-emergency violations of local ordinances to Ecology, provided, the Permittee also makes a documented effort of progressive enforcement. At a minimum, a Permittee's enforcement effort shall include documentation of inspections and warning letters or notices of violation. v. Application and enforcement of local ordinances at sites identified pursuant to S5.C.8.a.i., including sites with discharges authorized by a separate NPDES permit."	From the 2025 workshop: ● Source control enforcement is in line with other city enforcement programs: education and outreach, notice of violation (NOV), Voluntary Correction Agreement, and then fines. o Fines are $100 per day up to $500 per day	● Continue to implement escalating enforcement if sites do not comply with source control program requirements	● Evaluate the need to revise monetary penalties for stormwater violations (e.g., construction, source control, private facility maintenance)
S5.C.8.e – Source control training program "e. 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."	From 2025 SWMP Plan: ● The City's source control inspector has the following certifications: PSCIC (Professional Source Control Inspector Certification) and CESCL (Certified Erosion & Sediment Control Lead). ● The City encourages, and supports, any additional training and resources needed to succeed at the position. ● The City's source control inspector was shadowed during the beginning of their inspections by a supervisor, and was allowed to shadow inspectors at other municipalities with established programs.	● Continue to implement source control onboarding and refresher trainings ● Continue to allow staff to obtain the Professional Source Control Inspector Certification (PSCIC) if source control inspections are part of their job function	● Continue to train staff on NPDESPro software

Table A-9. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S5.C.9 – Implement SWMMWW O&M standards or equivalent "Each Permittee shall implement and document a program to regulate maintenance activities and to conduct maintenance activities by the Permittee to prevent or reduce stormwater impacts. The minimum performance measures are: a. Each Permittee shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in the Stormwater Management Manual for Western Washington [SWMMWW], or a Phase I program approved by Ecology. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard. No later than June 30, 2027, Permittees shall update their maintenance standards as necessary to meet the requirements of this Sections. i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a Permit violation. ii. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed. ● Within 1 year for typical maintenance of facilities, except catch basins. ● Within 6 months for catch basins. ● Within 2 years for maintenance that requires capital construction of less than $25,000. Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary Permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control."	From 2025 Stormwater Management Program Plan (SWMP Plan): ● Inspections and maintenance of the storm drainage system are conducted with the intent to meet established maintenance standards, to ensure full capacity and functionality.	● Continue annual review of O&M Program and performing maintenance promptly (within the timelines specified in the Permit). ● Update the Lacey SDM to include Ecology's updated maintenance standards	● Review and update inspection, operation and maintenance processes and procedures for City owned or operated stormwater catch basins, flow control and treatment facilities.

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Operations and Maintenance (Private Facilities)			
S5.C.9.b.i & ii – Maintenance of private facilities (inspections) "b. Maintenance of stormwater treatment and flow control BMPs/facilities regulated by the Permittee: i. The program shall include provisions to verify adequate long-term O&M of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to S5.C.6.c and shall be maintained in accordance with S5.C.9.a. The provisions shall include: (a) Implementation of an ordinance or other enforceable mechanism that: ● Clearly identifies the party responsible for maintenance in accordance with maintenance standards established under S5.C.9.a. ● Requires inspection of facilities in accordance with the requirements in (b), below. ● Establishes enforcement procedures. (b) Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.6.c, including those permitted in accordance with requirements adopted pursuant to the 2007-2024 Ecology municipal stormwater permits, unless there are maintenance records to justify a different frequency. Inspections shall be conducted by qualified personnel or a qualified third party. Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 – Certification and Signature. ii. Compliance with the inspection requirements in (b), above, shall be determined by the presence and records of an established inspection program designed to inspect all facilities, and achieving at least 80% of required inspections annually." S5.C.9.b.iii – Maintenance of private facilities (record keeping) "iii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, qualified personnel, and qualified third parties, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained."	From 2024 Annual Report: ● The City submitted a G20 letter since they were unable to achieve at least 80% of required inspections to verify adequate long-term O&M. From personal communication with Doug Christenson and Royce Young (July 2025): ● The City has hired an inspector to meet the private facility inspection requirements.	● Continue to implement a program to verify adequate long-term O&M of private stormwater treatment and flow control BMPs/facilities ● Continue to document inspections and escalating enforcement actions for private stormwater flow control and treatment BMPs/facilities	● Continue to coordinate with North Thurston Public Schools on inspections of schools within the city ● Continue to coordinate with Lacey Fire District 3 on inspections of fire stations within the city ● Develop a private facility stormwater inspection program for major maintenance projects

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Operations and Maintenance (Public Facilities)			
S5.C.9.c.i – Implement SWMMWW O&M standards or equivalent "c. Maintenance of stormwater facilities owned or operated by the Permittee: i. Each Permittee shall implement a program to annually inspect all municipally owned or operated stormwater treatment and flow control BMPs/facilities. Permittees shall implement appropriate maintenance action(s) in accordance with the adopted maintenance standards. The inspection program shall be implemented by qualified personnel. Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 – Certification and Signature."	From 2025 SWMP Plan: ● Operation and maintenance of the City's stormwater system is conducted by the Stormwater Division of the Transportation Maintenance Department of the City's Public Works Operations. From 2025 workshop: ● Annual inspections municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities are conducted. ● There are 52 known municipally owned or operated stormwater treatment and flow control BMPs/facilities. All 52 facilities were inspected and maintained during the reporting period. ● Pond maintenance is conducted multiple times during the summer and periodically throughout the rest of the year.	● Continue to annually inspect and maintain municipally owned or operated stormwater treatment and flow control BMPs/facilities according to Permit requirements	● Develop a pond maintenance program
S5.C.9.c.ii – Spot checks of potentially damaged stormwater treatment and flow control facilities/BMPs "ii. Each Permittee shall spot check potentially damaged 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, inspect all stormwater treatment and flow control BMPs/facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections."	From 2025 SWMP Plan: ● Lacey keeps records of problem areas and facilities and attempts to perform maintenance and correct problems each year before the storm season begins From 2024 Annual Report: ● The City conducted spot checks and inspections (if necessary) of potentially damaged stormwater facilities after major storms.	● Continue to implement spot checks and inspections after major storms	● Develop a checklist to help with spot checks

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.9.c.iii – Inspection of catch basins and inlets "iii. Each Permittee shall continue to inspect all catch basins and inlets owned or operated by the Permittee by December 31, 2025 and every two years after. 35 Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the Stormwater Management Manual for Western Washington. Decant water shall be disposed of in accordance with Appendix 6 – Street Waste Disposal. The following alternatives to the standard approach of inspecting all catch basins every two years may be applied to all or portions of the system: (a) The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experiences and shall be certified in accordance with G19 – Certification and Signature. (b) Inspections every two years may be conducted on a "circuit basis" whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include an inspection of the catch basin immediately upstream of any MS4 outfall, discharge point, or connections to public or private storm systems, if applicable. Clean all catch basins within a given circuit for which the inspection indicates cleaning is needed to comply with maintenance standards established under S5.C.9.a, above. (c) The Permittee may clean all pipes, ditches, and catch basins and inlets within a circuit once during the Permit term. Circuits selected for this alternative must drain to a single point."	From 2025 SWMP Plan: ● The City's MS4 is divided into a number of maintenance areas to optimize the cleaning and maintenance schedule. ● The City's aggressive maintenance schedule has an inspection and cleaning goal for each of Lacey's 6,696 catch basins.	● Continue to inspect catch basins and maintain as needed	● Purchase a small, single axle vactor truck to perform catch basin cleanings on narrow streets ● Develop a catch basin grouting program
S5.C.9.c.iv – Inspection program "iv. Compliance with the inspection requirements in S5.C.9.c.i-iii, above, shall be determined by the presence of an established inspection program achieving at least 95% of required inspections."	From 2025 workshop: ● Catch basins are inspected on a two-year cycle, with inspections occurring annually on high volume streets.	See summary in previous row	

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.9.d – Practices, policies, and procedures to reduce stormwater impacts "Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee No later than December 31, 2027, document the practices, policies, and procedures. Lands owned or maintained by the Permittee include but are not limited to: streets; parking lots; roads; highways; buildings; parks; open space; road rights-of-way; maintenance yards; and stormwater treatment and flow control BMPs/facilities. The following activities shall be addressed: i. Pipe cleaning. ii. Cleaning of culverts that convey stormwater in ditch systems. iii. Ditch maintenance. iv. Street cleaning. v. Road repair and resurfacing, including pavement grinding. vi. Snow and ice control. vii. Utility installation. viii. Pavement striping maintenance. ix. Maintaining roadside areas, including vegetation management. x. Dust control. xi. Application of fertilizers, pesticides, and herbicides according to the instructions for their use including reducing nutrients and pesticides and using alternatives that minimize environmental impacts. xii. Sediment and erosion control. xiii. Landscape maintenance and vegetation disposal. xiv. Trash and pet waste management. xv. Building exterior cleaning and maintenance. (a) For Permittee-owned buildings built or renovated between 1950-1980, update policies, practices, or procedures to include Source Control BMPs to minimize PCBs from entering the MS4. Permittees shall not discharge washdown water to the MS4 if the building is confirmed or suspected to have PCB-containing materials. xvi. Preparing Permittee-owned buildings for renovation or demolition. (a) Update policies, practices, or procedures to include Source Control BMPs for building materials to prevent PCBs from entering the MS4 in preparation for and during demolition and renovations."	From 2025 SWMP Plan: ● The City maintains standard operating procedures (SOPs) to reduce stormwater impacts associated with runoff from municipal O&M activities including but not limited to streets, parking lots, and roads owned or maintained by the City. These procedures address such potential sources as utility installation, street cleaning, and other City activities.	● Update practices, policies, and procedures to include Source Control BMPs for minimizing PCBs entering the MS4 from City-owned buildings exterior cleaning and maintenance and to prevent PCBs from entering the MS4 in preparation for and during demolition and renovation of City-owned buildings by December 31, 2027.	● Develop a ditch and culvert maintenance program ● Develop a stormwater conveyance condition assessment and rehabilitation/replacement program

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.9.e – Develop and implement a municipal street sweeping program "e. No later than July 1, 2027, develop and implement a municipal street sweeping program to focus on priority areas and times during the year that would reasonably be expected to result in the maximum water quality benefits to receiving waters. The following program elements shall be included: i. Priority areas: Apply street sweeping program to curbed municipal streets that discharge to outfalls and meet any of the following criteria: (a) High traffic streets, such as arterials or collectors. (b) Streets that serve commercial or industrial land use areas. ii. Program timing: Sweep priority areas at least once between July and September each year and at least two additional times a year as determined by the Permittee to provide additional water quality benefits. For calendar year 2027, only one sweeping event is required between July and December. (a) Compliance during this Permit term shall be determined by records of a sweeping program designed to sweep all priority areas identified and sweeping at least 90% of priority areas each sweeping event. (b) Permittee may document reasoning for alternative sweeping timing and frequency based on local conditions (e.g., climate) and estimated pollutant deposition quantities. Documentation shall also be based on actual maintenance experience and be certified in accordance with G19 – Certification and Signature. iii. Operational Procedures: Procedures to follow equipment design performance specifications to ensure that street sweeping equipment is operated at the proper design speed with appropriate verification, and that it is properly maintained. iv. Street Waste Disposal: Dispose of sweeper waste material in accordance with Appendix 6 – Street Waste Disposal. v. Reporting: No later than March 31, 2028, submit with the Annual Report the following information about the priority areas: (a) Priority areas swept identified on a map (i.e. streets that are considered high traffic (estimated number of vehicles served/or arterials or collectors, and streets serving commercial or industrial land use). (b) Sweeping date(s). (c) Sweeping frequency. (d) Type of sweeper. (e) Total curb miles of priority areas and curb miles swept. (f) Approximation of street waste solids removed for each sweeping event (indicate unit of measurement and wet or dry weight, where available)."	From 2025 SWMP Plan: ● Street sweeping waste and vactor truck waste is disposed of at the City of Lacey Pit/Decant Facility. o The liquid waste is decanted off where it goes through a settling tank and an oil water separator before heading to LOTT (Lacey, Olympia, Tumwater, and Thurston County) wastewater treatment facility. o The solid waste is dumped out on a covered concrete pad to dry while the liquids drain to sewer. o The solids are tested for petroleum hydrocarbons, heavy metals, and PAHs before they are taken to the local landfill. From 2024 Annual Report: ● The City's street sweeping area includes arterials, collectors, and local-access residential streets ● Priority areas include arterials, collectors, and other streets serving commercial and industrial areas within city limits ● The City has two Schwarze A7 Tornado high-efficiency regenerative-air street sweepers ● The City swept 6,588 miles in 2024	● Compare the City's established street sweeping program to the 2024-2029 Permit requirements to determine where adjustments may be needed ● Compare the City's established street sweeping program to the 2029-2034 Permit requirements to determine where adjustments may be needed ● Continue with street sweeping throughout the city when developing priority areas ● Submit the street sweeping priority areas in the 2028 Annual Report ● Review and update as necessary, the City's existing sweeping program and procedures to ensure compliance with Permit obligations (i.e., priority area criteria, sweeping timing and frequency, and information tracking and reporting).	● Rent a street sweeper to sweep on residential streets during the leaf season ● Evaluate retrofit opportunities for the City's decant facility, including options for material storage covers and solids drying

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.9.f – SWPPP implementation (inventory and mapping) "Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit…At a minimum, the SWPPP shall include: i. A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs when needed. BMPs selected must be consistent with the Stormwater Management Manual for Western Washington, or a Phase I program approved by Ecology. The SWPPP must be updated as needed to maintain relevancy with the facility. … iii. An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution. iv. A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure."	From 2024 Annual Report (attachment Q79 Lacey 2025 SWPPP): ● Operational BMPs include o Site maps (includes O&M centers) o Elimination of illicit connections to storm drains o Routine maintenance for stormwater drainage systems o Disposal of fluids and wastes properly o Proper storage of solid waste o Spill prevention and cleanup o Oversight and training for staff	● Continue to update and implement SWPPPs as needed	● None
S5.C.9.f – SWPPP implementation (inspections) "Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit … "ii. At minimum, annual inspections of the facility, including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections shall be documented in an inspection report or check list."	From 2024 Annual Report: ● SWPPP inspections occur yearly, staff check to ensure the BMPs are correct or if any new ones need to be added. o Staff identified in the pollution prevention team must ensure regular inspections of all areas on City-owned sites where heavy equipment maintenance or storage and material storage occurs to assess how well stormwater BMPs operate. o Complete, routine inspections must occur annually; a minimum of one additional inspection, preferably during the wet season (October through April). It is recommended that additional inspections be performed as appropriate after major events (e.g., >1 inch of precipitation in 24 hours or environmental incident that causes contaminant release). o The results of the inspections are recorded. If at any time a BMP is not effective, it must be repaired or maintained before the next anticipated storm event. If maintenance prior to the next storm event is not possible, maintenance must be completed as soon as possible and documented. In the interim, back-up measures must be implemented to ensure that stormwater quality is not diminished.	● Continue to conduct routine SWPPP inspections per the schedule outlined in the SWPPPs	● None
S5.C.9.f – SWPPP implementation (spill response) "Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit …" "v. A plan for preventing and responding to spills at the facility which could result in an illicit discharge."	From 2025 SWPPP: ● The City depends on its employees to implement spill prevention and to supply spill kit materials, clean up leaks and/or spills, and report spills. If the spill enters the Municipal separate storm drainage system, the City of Lacey Spill Response Team shall be notified immediately. ● All spills must be cleaned up as per the City of Lacey Spill Response Plan. Additionally, all spills shall be reported to the Spill Response Team. All spills will be entered into WQWebPortal. 911 will be called for any spill or illicit discharge significant enough to endanger human health or are larger than five gallons.	● Verify that completed inspection forms are kept with the SWPPPs at each site	● None

Table A-9 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Operations and Maintenance.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S5.C.9.g – Ongoing training program to protect water quality "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, street sweeper operation, 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."	From 2025 SWMP Plan: ● The City provides ongoing O&M training. From 2024 Annual Report: ● The City implemented an ongoing training program for staff whose primary construction, operations or maintenance job functions may impact stormwater quality.	● Continue to implement staff training program	● Continue to train staff on SwiftComply software ● Continue to train staff on NaviLine software
S5.C.9.h – Maintain records of inspections and maintenance "Maintain records of the activities conducted to meet the requirements of this Section."	From 2025 workshop: ● NPDESPro is used to maintain records of inspections of private facilities Personal communication with Doug Christenson and Royce Young: ● NaviLine is used to maintain records of inspections and maintenance of public facilities	● Continue to document and maintain records of training for City staff ● Summarize O&M activities in Annual Report, including updates to the SWMP Plan	● None

Table A-10. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Total Maximum Daily Load (TMDL) Requirements.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S7.A – Compliance with TMDL Requirements "The following requirements apply if an applicable TMDL is approved for stormwater discharges from MS4s owned or operated by the Permittee. Applicable TMDLs are TMDLs which have been approved by EPA on or before the issuance date of this Permit or prior to the date that Ecology issues coverage under this Permit, whichever is later. **A. TMDL Specific Requirements** 1. For applicable TMDLs listed in Appendix 2, affected Permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s). 2. For applicable TMDLs not listed in Appendix 2, compliance with this Permit shall constitute compliance with those TMDLs.	See summary in the following rows.	• Keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).	• None

Table A-10 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Total Maximum Daily Load (TMDL) Requirements.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Appendix 2 – TMDL Requirements **WRIA13 – Budd Inlet (Dissolved Oxygen TMDL)** City of Lacey – Actions Required ● No later than March 31, 2025, annually report on municipal stormwater BMPs implemented (in addition to those already required by S5 of the permit) since the effective date of this permit (August 1, 2024) to help control nutrients for areas discharging to Budd Inlet via the MS4. ● No later than December 31, 2027, begin using existing data to conduct spatial analysis of nutrient loading from the MS4. This analysis shall consider land use sources of nutrients, existing municipally owned/operated BMPs, and privately owned BMPs regulated by the Permit that provide management of nutrients and which drain to and are discharged from the MS4. ● No later than August 1, 2028, develop and implement priority BMPs to minimize the transport of nutrients via the MS4. ● Designate areas discharging via the MS4 to Budd Inlet as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for nutrient sources in 100% of these areas by July 31, 2029, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. ● For the actions described above, prioritize work and implementation actions within areas identified as priorities by the TMDL that are within the applicable jurisdiction, including East Bay Drive, West Bay Drive and Deschutes Parkway, tributaries draining directly to Budd Inlet, with extra emphasis on Schneider Creek, Ellis Creek, Mission Creek, Moxlie Creek, Percival Creek, Black Lake, and Black Lake Ditch	From 2025 SWMP Plan: ● The City plans to sample their contributing area to get a baseline for what nutrients are being discharged into Little Chamber's Lake. o This monitoring will help the City determine what additional best management practices (BMPs) and targeted outreach will be needed in the contributing area. It will also help us with the spatial analysis that is due at the end of 2027.	● No later than December 31, 2027, begin using existing data to conduct spatial analysis of nutrient loading from the MS4. ● No later than August 1, 2028, develop and implement priority BMPs to minimize the transport of nutrients via the MS4. ● Designate areas discharging via the MS4 to Budd Inlet as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for nutrient sources in 100% of these areas by July 31, 2029, and implement the schedules and activities identified in S5.C.5 of the Phase II Permit in response to any illicit discharges found. ● Develop a sampling plan for untreated outfalls near Chambers Lake.	● None

Table A-10 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Total Maximum Daily Load (TMDL) Requirements.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
Appendix 2 – TMDL Requirements **WRIA13 – Henderson Inlet Watershed Fecal Coliform Bacteria Water Quality Improvement Project** City of Lacey – Actions Required ● Annually implement the following best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Western Washington Phase II Municipal Stormwater Permit: a. Continue the Private Stormwater Facilities Maintenance Program, providing commercial and residential stormwater facility/BMP owners educational resources for facility function and maintenance requirements. b. Offer bacteria pollution reduction brochures, signage and pet waste stations to homeowners' associations. c. Maintain pet waste bag dispenser units in City parks. d. Install educational signage at City facilities/property. e. Submit a summary of actions completed with each annual report. ● Implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Western Washington Phase II Permit. a. Continue to use the Fecal Coliform Wet Weather Sampling Plan. The sampling program shall establish a regularly scheduled sampling schedule (at least two times per year), during the wet season (November through April), specific sampling locations, sampling protocols, parameters, analytical methods, and timelines for implementation. b. If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 of the Western Washington Phase II Permit. c. Submit a summary of sampling and investigations with each annual report. Phase I and Western Washington Phase II Municipal Stormwater Permits APPENDIX 2 - Total Maximum Daily Load (TMDL) Requirements – August 1, 2024 Page 47 of 58 ● Continue to communicate with the City of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities by December 31, 2024, in accordance with S5.C.5 of the Western Washington Phase II Permit. a. If sampling results indicate potential illicit discharges, conduct an investigation in accordance with S5.C.5 of the Western Washington Phase II Permit. b. Submit a summary of efforts with sampling, investigation, and enforcement actions taken with the annual reports.	From 2025 SWMP Plan: ● In 2013, the City implemented a Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility (CRSF), designed to identify and eliminate illicit discharges and illicit connections entering Woodland Creek and ultimately Henderson Inlet. o During the wet season (November-April) samples are collected and if the results indicate a potential discharge, follow-up source tracing to identify the source will be performed. o Samples collected in recent years at the inlet to the facility have been well below the threshold numbers so no additional IDDE tracing has been needed. ● Lacey and Olympia updated the Henderson TMDL Coordinated Sampling Plan in 2019 per the new 2019-2024 Phase II Permit. o This is a coordinated plan between the cities to monitor and reduce fecal coliform bacteria discharges to the Taylor wetland (Woodard Creek) from the Fones Rd./Taylor stormwater treatment facilities. o The plan specifies sampling during at least two storm events during the water year, when the facility discharges to Taylor wetland. The cities coordinate sampling within their respective storm systems. o When samples exceed 500 colony forming units (CFU)/100 milliliters (mL), the cities will discuss the results and follow-up with source tracing to isolate the problem(s). o Sampling results in 2021, 2022, and 2023 were below the threshold value and did not indicate illicit discharges, and there was no significant discharge to the wetlands during the 2024 season. ● City's Targeted Educational Plan for Septic System Owners was designed to encourage all septic system owners who live in Henderson Inlet within city limits to attend a septic maintenance workshop offered by Thurston County Environmental Health, teaching them how to properly care for their septic system and prevent system damage. ● The City implemented many programs in 2020, designed to educate citizens and eliminate fecal coliform loading in local waterways, including: o Continued implementation of the Private Stormwater Facilities Maintenance Program o Providing bacteria pollution reduction brochures, Don't Let Your Pooch Pollute signage and pet waste stations to homeowners' associations and pet related businesses o Maintaining pet waste bag dispensers in City parks o Installing educational signage at City facilities/property ● Property owners and people who rent homes with on-site septic systems learned to prolong the life of their septic system through water conservation and by eliminating harmful behaviors such as disposing of solid waste down drain or using hazardous cleaning products. o They also learned how to protect their investment and the environment by maintaining their septic system and having it pumped every 3-5 years. o Additionally, the City included education about proper maintenance of on-site septic systems in the annual Consumer Confidence Report (Water Quality Report) which was mailed to over 30,000 Lacey water customers. ● Replanting and nuisance vegetation management along Woodland Creek has been ongoing, with various coordinated volunteer events conducted annually in Woodland Creek Community Park. Personal correspondence with Royce Young (2025): ● The City updated the Henderson TMDL Coordinated Sampling Plan in early 2025	● Update the Henderson TMDL Coordinated Sampling Plan in 2029 for the 2029-2034 Phase II Permit. ● Annually implement the best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Phase II Permit. ● Continue to implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Phase II Permit. ● Continue to communicate with the city of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities. ● Perform fecal coliform bacteria sampling at the stormwater pipe located on River Mile 3.7 (i.e., Tanglewilde pipe) of Woodland Creek.	● None

Table A-10 (continued). City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Total Maximum Daily Load (TMDL) Requirements.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Appendix 2 – TMDL Requirements **WRIA13 – Deschutes River Watershed** City of Lacey – Actions Required ● Annually report on temperature reduction measures in the watershed	From 2025 SWMP Plan: ● The City will annually report on temperature reductions in the watershed	● Annually report on temperature reduction measures in the Deschutes River Watershed.	● None

Table A-11. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Monitoring and Assessment.

Permit Section and 2024-2029 Phase II Permit Language	Current Activities	Required Future Activities (2027-2035)	Recommended Future Activities (2027-2035)
S8.A – Regional status and trends monitoring "1. Permittees that chose S8.A.2 Regional Status and Trends Monitoring Option in the Phase II Western Washington Municipal Stormwater Permit August 1, 2019 – July 31, 2024, shall make a one-time payment into the Stormwater Action Monitoring (SAM) collective fund to implement regional small streams and marine nearshore areas status and trends monitoring in Puget Sound or, urban streams in the Lower Columbia River basin. This payment is due on or before December 1, 2024. Submit payment amount according to Section S8.D, below. 2. All City and County Permittees covered under the Phase II Western Washington Municipal Stormwater Permit, August 1, 2019 – July 31, 2024, except the Cities of Aberdeen and Centralia, shall notify Ecology in writing which of the following two options for regional status and trends monitoring (S8.A.2.a or S8.A.2.b) the Permittee chooses to carry out during this Permit term. The written notification with G19 signature is due to Ecology no later than December 1, 2024. Either option will fully satisfy the Permittee's obligations under this Section (S8.A.2). Each Permittee shall select a single option for this Permit term. a. Make annual payments into a Stormwater Action Monitoring (SAM) collective fund to implement regional receiving water status and trends monitoring of either: small streams and marine nearshore areas in Puget Sound or, urban streams in Clark and Cowlitz Counties in the Lower Columbia River basin, depending on the Permittee's location. The annual payments into the collective fund are due on or before August 15 each year beginning in 2025. Submit payments according to Section S8.D, below. Or b. Conduct stormwater discharge monitoring per the requirements in Section S8.C."	From the 2025 Stormwater Management Program Plan (SWMP Plan): ● The City submitted written notification in 2024 that annual payments would be made to Ecology's collective fund by August 15th each year beginning in 2025 for regional receiving water status and trends monitoring. ● Lacey's annual payment for S8.A is $14,545. ● Lacey also participates in additional monitoring: o Interlocal Monitoring Program with Thurston County and the Cities of Olympia and Tumwater o Volunteer Stream Monitoring Program with South Sound GREEN o Groundwater monitoring	● Continue to make annual payment of $14,545 (by August 15th each year) to the collective fund for S8.A	● Coordinate monitoring activities related to shared facilities (e.g. the Fones Road Stormwater Facilities) or for areas with multiple authorities (e.g. the Woodland Creek basin) with the City of Olympia and Thurston County on an annual basis
S8.B – Stormwater management program (SWMP) effectiveness and source identification studies "1. All Permittees that chose S8.B Effectiveness Studies Option in the Phase II Western Washington Municipal Stormwater Permit, August 1, 2019 – July 31, 2024, shall make a one-time payment into the collective fund for Stormwater Action Monitoring (SAM) to implement effectiveness studies and source identification studies. The payment is due on or before December 1, 2024. Submit payment according to Section S8.D, below. 2. All City and County Permittees covered under the Phase II Western Washington Municipal Stormwater Permit, August 1, 2019 – July 31, 2024, shall notify Ecology in writing which of the following two options (S8.B.2.a or S8.B.2.b) for effectiveness and source identification studies the Permittee chooses to carry out during this Permit term. The written notification with G19 signature is due to Ecology no later than December 1, 2024. a. Make annual payments into a SAM collective fund to implement effectiveness and source identification studies. The annual payments into the collective fund are due on or before August 15 each year beginning in 2025. Submit payments according to Section S8.D, below. Or b. Conduct stormwater discharge monitoring per the requirements in Section S8.C. 3. All Permittees shall provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active Stormwater Action Monitoring (SAM) projects. These requests will be limited to records of SWMP activities and associated data tracked and/or maintained in accordance with S5 – Stormwater Management Program for Cities, Towns, and Counties and/or S9 – Reporting Requirements. A maximum of three requests during the Permit term from the SAM Coordinator will be transmitted to the Permittee's permit coordinator via Ecology's regional permit manager. The Permittee shall have 90 days to provide the requested information."	From the 2025 SWMP Plan: ● The City submitted written notification in 2024 that annual payments would be made to Ecology's collective fund by August 15th each year beginning in 2025 to implement effectiveness and source identification studies. ● Lacey's annual payment for S8.B is $21,527.	● Continue to make annual payment of $21,527 (by August 15th each year) to the collective fund for S8.B ● Continue to provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active SAM projects	● None
S8.C – Stormwater discharge monitoring "1. This Section applies only to Permittees who choose to conduct stormwater discharge monitoring per S8.A.2.b and/or S8.B.2.b in lieu of participation in the regional status and trends monitoring and/or effectiveness and source identification studies…"	● Not applicable	● Not applicable	● None

Table A-12. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Reporting.			
Permit Section and 2024-2029 Phase II Permit Language	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
S9.A – Annual Report "A. No later than March 31 of each year beginning in 2025, each Permittee shall submit an Annual Report. The reporting period for the first Annual Report will be from January 1, 2024, through December 31, 2024. The reporting period for all subsequent Annual Reports will be the previous calendar year unless otherwise specified. 2. Permittees shall submit Annual Reports electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's website."	• The City submits Annual Reports to Ecology.	• Continue to update the SWMP Plan, answer the Annual Report questions, and submit the Annual Report each year.	• None
S9.B – Record Retention "Each Permittee is required to keep all records related to this permit and the SWMP for at least five years after the expiration date of this Permit."	• The City will continue to keep all records related to the permit and Stormwater Management Program (SWMP) Plan and will make records related to these available to the public.	• Continue retaining records for a minimum of five years after the expiration date of the Permit	• None

Table A-13. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Capital Improvement Program (CIP).			
Program	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Capital Improvement Program (CIP)	From 2023-2042 Capital Facilities Plan (CFP): ● Lacey's Storm and Surface Water Utility (Utility) implements a stormwater CIP that is included in the 2023-2042 CFP ● The Utility's main drivers for the CIP is to meet Phase II Permit requirements, alleviate flooding issues, address water quality concerns, and meet the needs of Public Works Operations by rehabilitating older facilities From State Fiscal Year 2025 Final Water Quality Funding Offer List and Intended Use Plan: ● Lacey received a Stormwater Financial Assistance Program (SFAP) grant for the White Fir Stormwater Installation project ($87,084) From 2025 CIP meeting discussion: ● Lacey had to forfeit the SFAP grant due to lack of staffing	● Meet the Stormwater Management for Existing Development (SMED) requirements found in Section S5.C.7 and Appendix 12 of the 2024-2029 Phase II Permit (refer to Table A-7).	● None

Table A-14. City of Lacey Stormwater Program Gap Analysis and Needs Assessment: Underground Injection Control (UIC) Rule.			
Rule	**Current Activities**	**Required Future Activities (2027-2035)**	**Recommended Future Activities (2027-2035)**
Underground Injection Control (UIC) Rule	From 2025 Stormwater Management Program Plan (SWMP Plan): ● The City has inventoried their stormwater facilities that are considered UICs wells and registered them with the Washington State Department of Ecology (Ecology) UIC program. o The City currently has 150 registered UIC wells. ● The City provides UIC guidance in the 2022 Stormwater Design Manual (SDM), which also provides the link to Ecology's UIC Program and registration. ● The City provides comments during the site plan review process for private development to ensure compliance with the 2022 SDM and to remind private UIC well owners of the requirement to register their UIC wells.	● Review the status of existing municipally owned UIC wells to ensure they are properly registered with Ecology's UIC Program. ● Identify any additional UIC Class V wells that predate 2/3/2006 and complete well assessments, if necessary. ● Conduct annual maintenance inspections of municipal UIC wells ● Perform maintenance activities on UIC wells when inspections identify an exceedance of maintenance standards. ● Integrate areas served by municipal UIC wells into the Illicit Discharge Detection and Elimination (IDDE) Program as part of routine response activities. ● Create a map of all municipal UIC wells to be used during IDDE spill response activities. ● Continue to provide comments during the site plan review process prior to construction and inspections during construction to ensure compliance with the latest SDM. ● Continue to remind private UIC well owners of the requirement to register all UIC wells with Ecology.	● None

Appendix B

Stormwater Management Program Detailed Implementation Tables

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Table B-1. Required and Recommended Future Activities for Stormwater Planning.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Technical Advisory Group	The Technical Advisory Group (TAG) should continue to meet periodically to discuss topics and provide recommendations to departments and programs with stormwater management program responsibilities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
2027 Annual Report	Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2027 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2027	☒	☐
2032 Annual Report	Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2032 Annual Report (expected to be required under S5.C.1.b of the 2029-2034 Permit). Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2032	☒	☐
LID BMP Barriers	Continue to annually assess and document administrative or regulatory barriers to implementation of LID principles or LID BMPs. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Tree Canopy Goals	**Develop and adopt tree canopy goals and policies to support stormwater management. Assumes 80 hours in 2028 to develop and adopt the goals.**	**12/31/2028**	☒	☐
Stormwater Management Goals	Document considerations, reasoning, and rationale for goals and policies to support stormwater management. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Woodland Creek SMAP	**Add actions to the Woodland Creek SMAP. Assumes most of the updates would occur in 2026 and that 40 hours is needed in 2027 to finalize the SMAP.**	**3/31/2027**	☒	☐
Future SMAP	**Develop a new SMAP or add actions to an existing SMAP (expected to be required under S5.C.1.d of the 2029-2034 Permit). Assumes 200 staff hours in 2031 and 2032 to prepare or update the SMAP.**	**3/31/2032**	☒	☒

Table B-1. Required and Recommended Future Activities for Stormwater Planning.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required level of service.	Ongoing	☐	☒
LID Planning	**Continue to coordinate with Planning staff on how stormwater management, protection and improvement of water quality, low impact development (LID), and tree canopy will impact long-range planning. Assumes 40 hours per year starting in 2027 to continue collaborating with Planning staff.**	**Ongoing**	☐	☒

Table B-1. Required and Recommended Future Activities for Stormwater Planning (Staffing)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Tree Canopy Goals	0	**80**	0	0	0	0	0	0	0
Woodland Creek SMAP	**40**	0	0	0	0	0	0	0	0
Future SMAP	0	0	0	0	**160**	**40**	0	0	0
Required Staffing (Hours)	**40**	**80**	**0**	**0**	**160**	**40**	**0**	**0**	**0**

Table B-1. Required and Recommended Future Activities for Stormwater Planning (Staffing)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[d]									
All activities from the Required Level of Service	**40**	**80**	**0**	**0**	**160**	**40**	**0**	**0**	**0**
LID Planning	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
Recommended Staffing (Hours)	**80**	**120**	**40**	**40**	**200**	**80**	**40**	**40**	**40**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] The staffing hours presented in this table are in addition to current staffing levels.

[d] The recommended level of service is inclusive of the required level of service.

Table B-2. Required and Recommended Future Activities for Public Education and Outreach.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Outreach Materials	Develop materials for one new target audience and one new subject area annually. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Education and Outreach Activities	Implement new or modify existing education and outreach activities, continue to track activities and monitor success. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
PCB Educational and Workshop Materials	**Develop PCB educational and workshop materials. These educational and workshop materials will align with the City's practices, policies, and procedures for building exterior cleaning and maintenance that need to be completed by December 2027. Assumes 40 hours in 2028 to develop the educational and workshop materials based on Ecology's How to Find and Address PCBs in Building Materials guide.**	**One-time (flexible due date)**	☒	☐
Review Materials for PCB Requirements	Review and develop public education and outreach materials and SOPs to assess both publicly-owned and privately-owned buildings for PCB-containing materials, and to educate contractors/building owners on the new requirements for pressure washing and demolition/renovation. Assumes the staffing and funding would be covered by PCB Educational and Workshop Materials above.	One-time (flexible due date)	☒	☐
Behavior Change Strategy	**Develop strategy and schedule and begin broadscale implementation of behavior change for selected priority audience(s) and behavior(s). Assumes 100 hours in 2030 to develop the strategy and schedule. Ongoing staff support to execute the behavior change strategy would be included with the current level of stormwater utility funding.**	**Ongoing**	☒	☒
Behavior Change Campaign	Evaluate the effectiveness of the City's ongoing behavior change campaign (expected to be required under S5.C.2.a.ii of the 2034 Permit). Assumes funding and staff support would be included with the current level of stormwater utility funding.	7/1/2030	☒	☐
Behavior Change Evaluation Report	Develop a behavior change evaluation report to submit with the 2029 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2029	☒	☐

Table B-2. Required and Recommended Future Activities for Public Education and Outreach.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Behavior Change Campaign Evaluation	Evaluate the effectiveness of the behavior change campaign and adjust as needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Stewardship Activities	Continue to host, promote, and advertise stewardship activities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-2. Required and Recommended Future Activities for Public Education and Outreach.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☒	☒
Educational Workshops	**Develop quarterly public stormwater and water resource protection workshops. Assumes 40 hours per year starting in 2028 to plan, develop content, and host workshops.**	**Ongoing**	☐	☒
Adopt-a-Drain Program	**Tailor the Adopt-a-Drain program to be relevant to City residents and businesses. This process will involve updating Hamline University's materials to focus on City needs. Assumes 20 hours in 2031 to make the updates.**	**One-time (flexible due date)**	☒	☐
Education and Outreach on SDM	**Conduct public education and outreach on implementation of the updated Stormwater Design Manual (SDM). Assumes 20 hours in 2028 to advertise and host informational sessions with SDM users.**	**One-time (flexible due date)**	☒	☐
Overburdened Community Pet Waste Program	**Develop an overburdened community pet waste program. This program would supply pet waste bags to overburdened communities, including mobile home parks, low income apartment complexes, and senior living apartments with income restrictions. The communities would be responsible for providing the pet waste trash cans and waste disposal. Assumes $1,000 per year for the pet waste bags starting in 2027. Ongoing staff support to refill the stations would be included with the current level of stormwater utility funding.**	**Ongoing**	☐	☒

Table B-2. Required and Recommended Future Activities for Public Education and Outreach.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
Stewardship Events Collaboration	**Continue to coordinate with Parks on stewardship events. Assumes 20 hours per year starting in 2027 to coordinate and host events with Parks.**	**Ongoing**	☐	☒
Riparian Area Restoration	**Identify additional riparian areas in need of restoration (planting, invasive removal, erosion control) to expand stewardship opportunities (including at Greg Cuoio Park). Assumes 40 hours in 2029 to identify and document areas in need of restoration. Ongoing staff support to host the stewardship activities would be included with the current level of stormwater utility funding.**	**One-time (flexible due date)**	☒	☐

Table B-2. Required and Recommended Future Activities for Public Education and Outreach (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Overburdened Community Pet Waste Program	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**
Recommended Funding	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**

Table B-2. Required and Recommended Future Activities for Public Education and Outreach (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Behavior Change Strategy	0	0	0	**100**	0	0	0	0	0
Required Staffing (Hours)	**0**	**0**	**0**	**100**	**0**	**0**	**0**	**0**	**0**

Table B-2. Required and Recommended Future Activities for Public Education and Outreach (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	0	0	0	**100**	0	0	0	0	0
Educational Workshops	0	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
Adopt-a-Drain Program	0	0	0	0	**20**	0	0	0	0
Education and Outreach on SDM	0	**20**	0	0	0	0	0	0	0
PCB Educational and Workshop Materials	0	**40**	0	0	0	0	0	0	0
Overburdened Community Pet Waste Program	0	0	0	0	0	0	0	0	0
Stewardship Events Collaboration	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
Riparian Area Restoration	0	0	**40**	0	0	0	0	0	0
Recommended Staffing (Hours)	**20**	**120**	**100**	**160**	**80**	**60**	**60**	**60**	**60**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Public Input	Continue to provide opportunities for public input, including overburdened communities, on the City's stormwater website related to the Stormwater Management Plan (SWMP) Plan and Stormwater Management Action Plan (SMAP). Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SWMP Plan and Annual Report	Continue to post the updated SWMP Plan and Annual Report on the City's website. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Overburdened Communities Outreach Program	**Develop an outreach program to further engage overburdened communities. This program will include reaching out to overburdened communities to understand their relationship with stormwater. To support the overburdened communities, this program will provide childcare, small stipends, translators, translated educational materials, and room rentals. Assumes $10,000 and 884 hours (or 0.50 FTE) of staff support per year starting in 2028 to develop and administer the program.**	**One-time (flexible due date)**	☒	☐
City Website Updates	**Update the Stormwater and Stormwater Utility webpages on the City's website using user experience (UX) principles. Assumes 80 hours of staff time in 2029 to develop the content and work with the City's webmaster on the updates.**	**One-time (flexible due date)**	☒	☐

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒
Identify Overburdened Communities	Continue to document methods used to identify overburdened communities. Assumes funding and staffing will be included in the Overburdened Communities Outreach Program below.	**Ongoing**	☐	☒
Yearly Open House	**Host a yearly open house to discuss the City's SWMP Plan, SMAP, and SMED program and projects. Assumes 80 hours in 2027 and 40 hours per year starting in 2028 to plan, develop content, and host the yearly open house.**	**One-time (flexible due date)**	☒	☐

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation (Funding)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Overburdened Communities Outreach Program	**$0**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**
Required Funding	**$0**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**$0**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**
Recommended Funding	**$0**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**	**$10,000**

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Overburdened Communities Outreach Program	**0**	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Required Staffing (Hours)	**0**	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**

Table B-3. Required and Recommended Future Activities for Public Involvement and Participation (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**0**	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Yearly Open House	**80**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
City Website Updates	**0**	**0**	**80**	**0**	**0**	**0**	**0**	**0**	**0**
Recommended Staffing (Hours)	**80**	**924**	**1,004**	**924**	**924**	**924**	**924**	**924**	**924**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-4. Required and Recommended Future Activities for MS4 Mapping and Documentation.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
MS4 Mapping	Continue to maintain and update the City's MS4-related mapping data on an ongoing basis. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Tree Canopy Mapping	Map tree canopy to support stormwater management on City-owned or operated properties by December 31, 2026. Assumes funding and staff support would be included with the current level of stormwater utility funding.	12/31/2026	☒	☐
Identify MS4 Tributary Basins	Implement a methodology to map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have stormwater treatment and flow control BMPs/facilities owned or operated by the City and submit it in the 2028 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2028	☒	☐
Outfall Mapping	Continue to update outfall mapping information as needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Overburdened Community Mapping	Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on City-owned or operated properties by December 31, 2026. Assumes funding and staff support would be included with the current level of stormwater utility funding.	12/31/2026	☒	☐
Map Maintenance	Continue to maintain electronic maps and corresponding data attributes. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-4. Required and Recommended Future Activities for MS4 Mapping and Documentation.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	Ongoing	☐	☒
GIS Schema	**Continue to develop a defined schema for infrastructure data stored in GIS. Assumes 40 hours in 2028 and 20 hours per year starting in 2029 to continually refine the City's schema for stormwater GIS data.**	**Ongoing**	☐	☒
GIS Intern	**Hire an intern to support stormwater GIS updates in older areas of the city. Assumes 442 hours (or 0.25 FTE) to hire a full-time intern for 3 months in 2029. Staff support to develop the workload and supervise the intern would be included with the current level of stormwater utility funding.**	**One-time (flexible due date)**	☒	☐
Drone Evaluation	**Evaluate using a drone to support ongoing mapping. Assumes $10,000 in 2031 to hire a consultant to perform the evaluation and develop a plan for the City's drone program.**	**One-time (flexible due date)**	☒	☐
Ditch Network Mapping	**Continue to map the City's ditch network. Assumes 40 hours per year starting in 2030 to field verify and add ditches to the City's GIS.**	**One-time (flexible due date)**	☒	☐
DNR Grant	**Apply for a Department of Natural Resources (DNR) grant to perform an additional tree canopy assessment. Assumes that 80 hours of staff time is needed in 2027 to apply for the DNR Community Forestry Assistance Grants in 2027 (dependent on DNR's supplemental budget request during Washington State's 2026 Legislative Session).**	**12/31/2027**	☒	☐

Table B-4. Required and Recommended Future Activities for MS4 Mapping and Documentation (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Drone Evaluation	$0	$0	$0	$0	**$10,000**	$0	$0	$0	$0
Recommended Funding	**$0**	**$0**	**$0**	**$0**	**$10,000**	**$0**	**$0**	**$0**	**$0**

Table B-4. Required and Recommended Future Activities for MS4 Mapping and Documentation (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
GIS Schema	0	**40**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
GIS Intern	0	0	**442**	0	0	0	0	0	0
Drone Evaluation	0	0	0	**40**	**40**	**40**	**40**	**40**	**40**
Ditch Network Mapping	**80**	0	0	0	0	0	0	0	0
DNR Grant	0	**40**	0	0	0	0	0	0	0
Recommended Staffing (Hours)	**80**	**80**	**462**	**60**	**60**	**60**	**60**	**60**	**60**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Pollution Prevention Resources	Continue to provide information regarding the City's pollution prevention and control resources, including methods for reporting spills, illicit discharges, and illicit connections. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Lacey Municipal Code Review	**Review and update the Lacey Municipal Code (LMC) to reflect the new requirements prohibiting washdown water from buildings containing PCB materials and post-emergency clean-up procedures. Assumes $5,000 of consultant support and 40 hours of staff time to make the updates in 2028.**	**12/31/2028**	☒	☐
Field Screening	Continue field screening for illicit connections and illicit discharges. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☒	☐
Spill Hotline	Continue to implement spill hotline and online reporting form. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☒	☐
Staff Training	Continue to implement staff training program. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Police IDDE Training	Continue to implement the IDDE training for the Lacey Police Department (Police). Assumes funding and staff support would be included with the current level of stormwater utility funding (stormwater staff) and general fund (Police).	Ongoing	☐	☒
Develop Post-Emergency Clean Up Procedure	**Work with the City's Street/Storm Maintenance Division and Community and Economic Development departments to develop post-emergency clean-up procedures. Assumes 100 hours in 2030 to develop the procedures across City departments.**	**One-time (flexible due date)**	☒	☐

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Clean Up Procedure Coordination	**Continue to work with Lacey Fire District 3 to develop procedures for clean-up. Assumes 20 hours per year starting in 2027 to continue to coordinate with Lacey Fire District 3.**	**Ongoing**	☐	☒
Spill and Complaint Response	Continue to respond to spills and water quality complaints. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Tracking	Continue tracking the number of illicit discharges, illicit connections, and spills. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Reporting to Ecology	Continue to report illicit discharge data to Ecology. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Summarize Activities	Summarize annual activities for the IDDE component of the Annual Report, including updates to the SWMP Plan. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒
Stormwater Outfall Illicit Discharge Program	Develop a stormwater outfall illicit discharge program. This program will include dry-weather screening and field testing. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Illicit Discharge Enforcement SOP	**Develop an illicit discharge enforcement SOP. Assumes 40 hours in 2028 to develop the SOP.**	**One-time (flexible due date)**	☒	☐

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination (Funding)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Lacey Municipal Code Review	$0	**$5,000**	$0	$0	$0	$0	$0	$0	$0
Required Funding	**$0**	**$5,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Lacey Municipal Code Review	0	**40**	0	0	0	0	0	0	0
Develop Post-Emergency Clean Up Procedure	0	0	0	**100**	0	0	0	0	0
Clean Up Procedure Coordination	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
Required Staffing (Hours)	**20**	**60**	**20**	**120**	**20**	**20**	**20**	**20**	**20**

Table B-5. Required and Recommended Future Activities for Illicit Discharge Detection and Elimination (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**20**	**60**	**20**	**120**	**20**	**20**	**20**	**20**	**20**
Illicit Discharge Enforcement SOP	0	**40**	0	0	0	0	0	0	0
All activities from the Required Level of Service	0	**40**	0	0	0	0	0	0	0
Recommended Staffing (Hours)	**20**	**100**	**20**	**120**	**20**	**20**	**20**	**20**	**20**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
SDM Updates - Equivalency with 2024 SWMMWW	Update the City's SDM to incorporate and adopt the required updates from Ecology's 2024 SWMMWW by June 30, 2027. Assumes funding and staff support for the SDM update would be included in the Capital Improvement Program.	6/30/2027	☒	☐
SDM Updates - Equivalency with 2029 SWMMWW	Update the City's SDM to incorporate and adopt the required updates from Ecology's 2029 SWMMWW by June 30, 2032 (expected to be required under S5.C.6.b of the 2029-2034 Permit). Assumes funding and staff support for the SDM update would be included in the Capital Improvement Program.	6/30/2032	☒	☐
Staff Training - SDM Updates	**Conduct staff training on implementation of the updated SDM (including implementation of the wet season SWPPP). Assumes 40 hours in 2028 to develop and host the training.**	**One-time (flexible due date)**	☒	☐
Stormwater Plan Review	**Continue to implement stormwater plan review. Assumes 1,768 hours (or 1 FTE) is needed to starting in 2027 to maintain review times for the increasing number and complexity of stormwater plan reviews.**	**Ongoing**	☐	☒
Erosion and Sediment Control Inspections	Continue to implement preconstruction erosion and sediment control inspections. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
BMP Installation and Maintenance Procedure	Continue to refine and improve enforcement procedures to ensure proper installation and maintenance of erosion and sediment control BMPs. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Residential Inspections	Continue to inspect all stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments at least twice per 12-month period. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Pre-occupancy Inspections	Continue to inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Construction NOI	Continue to support Ecology by providing the "Notice of Intent" (NOI) forms for Construction Activity and Industrial Activity. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Staff Training	Continue to implement staff training program. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SDM Updates - Equivalency with 2024 SWMMWW	Update the City's SDM to incorporate and adopt the required updates from Ecology's 2024 SWMMWW by June 30, 2027. Assumes funding and staff support for the SDM update would be included in the Capital Improvement Program.	6/30/2027	☒	☐

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	Ongoing	☐	☒
Information Management System Revisions	**Revise information management systems to track and report construction, new development and redevelopment permits, inspection and enforcement actions and Private Drainage Inspection Program inspections and enforcement actions. Assumes $20,000 of consultant support and 100 hours in 2032 to update the information management system to track construction, inspection, and enforcement actions.**	**One-time (flexible due date)**	☒	☐
Standardization of Processes and Procedures	**Develop standardized plan review, inspection, enforcement and compliance documentation and tracking processes and procedures. Assumes $20,000 of consultant support and 100 hours in 2033 to document the processes and procedures.**	**One-time (flexible due date)**	☒	☒
Staff Training - Modeling Software	**Conduct WWHM, MGSFlood, MODFLOW, MODRET, and other software training for staff who perform modeling as one of their job duties. Assumes $5,000 and 100 hours in 2029 to take trainings hosted by others.**	**One-time (flexible due date)**	☒	☐

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Information Management System Revisions	$0	$0	$0	$0	$0	**$20,000**	$0	$0	$0
Standardization of Processes and Procedures	$0	$0	$0	$0	$0	$0	**$20,000**	$0	$0
Staff Training - Modeling Software	$0	$0	**$5,000**	$0	$0	$0	$0	$0	$0
Recommended Funding	**$0**	**$0**	**$5,000**	**$0**	**$0**	**$20,000**	**$20,000**	**$0**	**$0**

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Staff Training - SDM Updates	0	**40**	0	0	0	0	0	0	0
Stormwater Plan Review	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**
Required Staffing (Hours)	**1,768**	**1,808**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**

Table B-6. Required and Recommended Future Activities for Controlling Runoff from New Development, Redevelopment, and Construction Sites (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**1,768**	**1,808**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**
Information Management System Revisions	0	0	0	0	0	**100**	0	0	0
Standardization of Processes and Procedures	0	0	0	0	0	0	**100**	0	0
Recommended Staffing (Hours)	**1,768**	**1,808**	**1,868**	**1,768**	**1,768**	**1,868**	**1,868**	**1,768**	**1,768**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-7. Required and Recommended Future Activities for Stormwater Management for Existing Development.				
Required Future Activity[a]	**Details**	**Due Date**	**One-Time[b]**	**Ongoing[c]**
Required Level of Service				
Strategic Stormwater Investments Selection	Select a set of strategic stormwater investments identified in the Stormwater Management Action Plan (SMAP), stormwater Capital Improvement Program (CIP), or opportunistic stormwater investments identified by leveraging projects outside of SMAP areas. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Stormwater Project Identification	Identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's compliance target of 9.3 equivalent acres. Assumes projects have been identified through the Capital Improvement Program.	Ongoing	☐	☒
Future Stormwater Project Identification	Continue to identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's future compliance target in the 2029-2034 Permit. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Planned Project List	Develop a list of planned projects, update annually, and submit to Ecology with the Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Project Implementation	Fully fund, start construction, or completely implement project(s) that manage 9.3 equivalent acres. Assumes funding and staff support for the project implementation would be included in the Capital Improvement Program (for retrofit projects) or current level of stormwater utility funding (for programmatic projects).	Ongoing	☐	☒
SMED Documentation	Submit documentation of achieving the 9.3 equivalent acre target with the 2028 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2028	☒	☐

Table B-7. Required and Recommended Future Activities for Stormwater Management for Existing Development.				
Required Future Activity[a]	**Details**	**Due Date**	**One-Time[b]**	**Ongoing[c]**
Required Level of Service				
Regional Stormwater Investment Coordination	Consider coordinating with Thurston County and the Cities of Olympia and Tumwater on stormwater investments to meet regional goals (the City can receive up to 25% of assigned acreage credit from collaborative projects if at least 0.5 equivalent acres are managed within the City). Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Report Acres Managed	Report the amount of estimated or projected equivalent acres managed by stormwater facility retrofits, restoration projects, and maintenance activities (e.g., street sweeping and line cleaning) to submit with the 2028 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2028	☒	☐
Strategic Stormwater Investments Selection	Select a set of strategic stormwater investments identified in the Stormwater Management Action Plan (SMAP), stormwater Capital Improvement Program (CIP), or opportunistic stormwater investments identified by leveraging projects outside of SMAP areas. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-7. Required and Recommended Future Activities for Stormwater Management for Existing Development.				
Recommended Future Activity[a]	**Details**	**Due Date**	**One-Time[b]**	**Ongoing[c]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	Ongoing	☐	☒

[a] No additional funding or staffing is proposed for these future activities in this table. Refer to Table B-13 (Required and Recommended Future Activities for Capital Improvement Program [CIP]) for more information about staffing required to meet Stormwater Management for Existing Development.

[b] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[c] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

Table B-8. Required and Recommended Future Activities for Source Control Program for Existing Development.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Refine Escalating Enforcement Procedures	Continue to refine and improve escalating enforcement procedures, including roles and responsibilities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Update Source Control Inventory	Continue to update the source control inventory at least once every five years. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Implement Escalating Enforcement	Continue to implement escalating enforcement if sites do not comply with source control program requirements. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Education to Businesses	Continue to provide information about the source control program to business owners and operators. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Meet Inspection Target	Continue to meet the 20% inspection target for the source control program on an annual basis. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Respond to Complaints	Continue to respond to credible complaints. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Onboarding and Refresher Trainings	Continue to implement source control onboarding and refresher trainings. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
PSCIC Training	**Continue to allow staff to obtain the Professional Source Control Inspector Certification (PSCIC) if source control inspections are part of their job function. Assumes $2,000 every three years starting in 2029 for two inspectors to take the training and staff time would be included with the current level of stormwater utility funding.**	**Ongoing**	☐	☒

Table B-8. Required and Recommended Future Activities for Source Control Program for Existing Development.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒
Information Management System Revisions	Revise information management systems to track and report construction, new development and redevelopment permits, inspection and enforcement actions and Private Drainage Inspection Program inspections and enforcement actions. Funding and staff support is included in Table B-6.	12/31/2032	☒	☐
Staff Training - SwiftComply Software	**Continue to train staff on SwiftComply software. Assumes that the training cost is included in the SwiftComply subscription and 100 hours per year is needed starting in 2027 to continue to participate in the trainings.**	**Ongoing**	☐	☒

Table B-8. Required and Recommended Future Activities for Source Control Program for Existing Development (Funding)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
PSCIC Training	$0	$0	**$2,000**	$0	$0	**$2,000**	$0	$0	**$2,000**
Required Funding	**$0**	**$0**	**$2,000**	**$0**	**$0**	**$2,000**	**$0**	**$0**	**$2,000**

Table B-8. Required and Recommended Future Activities for Source Control Program for Existing Development (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	$0	$0	**$2,000**	$0	$0	**$2,000**	$0	$0	**$2,000**
Recommended Funding	**$0**	**$0**	**$2,000**	**$0**	**$0**	**$2,000**	**$0**	**$0**	**$2,000**

Table B-8. Required and Recommended Future Activities for Source Control Program for Existing Development (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Staff Training - SwiftComply Software	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Recommended Staffing (Hours)	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-9. Required and Recommended Future Activities for Operations and Maintenance.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Annual Review of O&M Program	Continue annual review of O&M Program and performing maintenance promptly (within the timelines specified in the Permit). Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SDM Updates - Maintenance Standards	Update the Lacey SDM to include Ecology's updated maintenance standards. Assumes funding and staff support for the SDM update would be included in the Capital Improvement Program.	6/30/2027	☒	☐
Implement Private Stormwater O&M Program	**Continue to implement a program to verify adequate long-term O&M of private stormwater treatment and flow control BMPs/facilities. Assumes 1,768 hours (or 1 FTE) starting in 2028 to support additional private facility inspections to meet Permit requirements.**	**Ongoing**	☐	☒
Document Inspections and Escalating Enforcement	Continue to document inspections and escalating enforcement actions for private stormwater flow control and treatment BMPs/facilities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Public Stormwater O&M	**Continue to annually inspect and maintain municipally owned or operated stormwater treatment and flow control BMPs/facilities according to Permit requirements. Assumes 884 hours (or 0.5 FTE) starting in 2028 to support additional public stormwater facility inspections and maintenance to meet Permit requirements.**	**Ongoing**	☐	☒
Spot Checks	Continue to implement spot checks and inspections after major storms. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Catch Basin Inspections and Maintenance	Continue to inspect catch basins and maintain as needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Update SOPs on Minimizing PCBs	**Update practices, policies, and procedures to include Source Control BMPs for minimizing PCBs entering the MS4 from City-owned buildings exterior cleaning and maintenance and to prevent PCBs from entering the MS4 in preparation for and during demolition and renovation of City-owned buildings by December 31, 2027. Assumes 40 hours in 2027 to develop the SOP.**	**12/31/2027**	☒	☐

Table B-9. Required and Recommended Future Activities for Operations and Maintenance.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Current Street Sweeping Program Evaluation	Compare the City's established street sweeping program to the 2024-2029 Permit requirements to determine where adjustments may be needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Future Street Sweeping Program Evaluation	Compare the City's established street sweeping program to the 2029-2034 Permit requirements to determine where adjustments may be needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Street Sweeping	**Continue with street sweeping throughout the city when develop priority areas. Assumes 884 hours (or 0.5 FTE) starting in 2028 to support additional street sweeping to meet Permit requirements.**	**Ongoing**	☐	☒
Street Sweeping Priority Areas	Submit the street sweeping priority areas in the 2028 Annual Report. Assumes funding and staff support would be included with the current level of stormwater utility funding.	3/31/2028	☒	☐
Review Street Sweeping Program	Review and update as necessary, the City's existing sweeping program and procedures to ensure compliance with Permit obligations (i.e., priority area criteria, sweeping timing and frequency, and information tracking and reporting). Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SWPPP Updates	Continue to update and implement Stormwater Pollution Prevention Plans (SWPPPs) as needed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SWPPP Inspections	Continue to conduct routine SWPPP inspections per the schedule outlined in the SWPPPs. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
SWPPP Recordkeeping	Verify that completed inspection forms are kept with the SWPPPs at each site. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-9. Required and Recommended Future Activities for Operations and Maintenance.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Training Program	Continue to implement staff training program. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Training Program Recordkeeping	Continue to document and maintain records of training for City staff. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
O&M Annual Reporting	Summarize O&M activities in Annual Report, including updates to the SWMP Plan. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-9. Required and Recommended Future Activities for Operations and Maintenance.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒
O&M Processes and Procedures Update	**Review and update inspection, operation and maintenance processes and procedures for City owned or operated stormwater catch basins, flow control and treatment facilities. Assumes 40 hours in 2027 to review and update the processes and procedures.**	**Ongoing**	☐	☒
North Thurston Public Schools Coordination	**Continue to coordinate with North Thurston Public Schools on inspections of schools within the city. Assumes 40 hours starting in 2027 to continue inspecting the schools.**	**Ongoing**	☐	☒
Lacey Fire District 3 Coordination	**Continue to coordinate with Lacey Fire District 3 on inspections of fire stations within the city. Assumes 20 hours starting in 2027 to continue inspecting the five fire stations.**	**Ongoing**	☐	☒
Private Facility Maintenance Program for Major Maintenance Projects	**Develop a private facility stormwater inspection program for major maintenance projects. These major maintenance projects include repairs for private stormwater facilities, such as pond liners. Assumes 884 (or 0.5 FTE) starting in 2028 to administer the inspection program.**	**Ongoing**	☐	☒
Street Sweeper Rental	**Rent a street sweeper to sweep on residential streets during the leaf season. Assumes $14,000 per year starting in 2027 to rent the street sweeper.**	**Ongoing**	☐	☒

Table B-9. Required and Recommended Future Activities for Operations and Maintenance.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
Decant Facility Retrofits Evaluation	**Evaluate retrofit opportunities for the City's decant facility, including options for material storage covers and solids drying. Assumes $100,000 of consultant support and 100 hours of staff time to perform the evaluation in 2030.**	**One-time (flexible due date)**	☒	☐
Spot Checks Checklist	**Develop a checklist to help with spot checks. Assumes 20 hours in 2029 to develop the spot checks checklist.**	**One-time (flexible due date)**	☒	☐
Vactor Truck	**Purchase a small, single axle vactor truck to perform catch basin cleanings on narrow streets. Assumes $750,000 in 2030 to purchase the vactor truck.**	**One-time (flexible due date)**	☒	☐
Catch Basin Grouting Program	**Develop a catch basin grouting program. Assumes 442 hours (or 0.25 FTE) starting in 2029 to develop a list of catch basin repairs and perform the repairs. The grout and equipment needed would be included with the current level of stormwater utility funding.**	**Ongoing**	☐	☒
Ditch and Culvert Maintenance Program	**Develop a ditch and culvert maintenance program. Assumes 442 hours (or 0.25 FTE) starting in 2030 to map the ditches and culverts and perform the maintenance. The equipment needed for mapping and maintenance would be included with the current level of stormwater utility funding.**	**Ongoing**	☐	☒
Staff Training - NaviLine Software	**Continue to train staff on NaviLine software. Assumes 40 hours and $1,000 per year is needed starting in 2027 to continue to participate in the trainings.**	**Ongoing**	☐	☒

Table B-9. Required and Recommended Future Activities for Operations and Maintenance (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Street Sweeper Rental	**$14,000**	**$14,000**	**$14,000**	**$14,000**	**$14,000**	**$14,000**	**$14,000**	**$14,000**	**$14,000**
Decant Facility Retrofits Evaluation	$0	$0	$0	$0	**$100,000**	$0	$0	$0	$0
Vactor Truck	$0	$0	$0	$0	**$750,000**	$0	$0	$0	$0
Staff Training - NaviLine Software	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**	**$1,000**
Recommended Funding	**$15,000**	**$15,000**	**$15,000**	**$865,000**	**$15,000**	**$15,000**	**$15,000**	**$15,000**	**$15,000**

Table B-9. Required and Recommended Future Activities for Operations and Maintenance (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Implement Private Stormwater O&M Program	0	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**
Public Stormwater O&M	0	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Update SOPs on Minimizing PCBs	**40**	0	0	0	0	0	0	0	0
Street Sweeping	0	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Required Staffing (Hours)	**40**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**

Table B-9. Required and Recommended Future Activities for Operations and Maintenance (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**40**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**	**3,536**
O&M Processes and Procedures Update	**40**	0	0	0	0	0	0	0	0
North Thurston Public Schools Coordination	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
Lacey Fire District 3 Coordination	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
Private Facility Maintenance Program for Major Maintenance Projects	0	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Decant Facility Retrofits Evaluation	0	0	0	**100**	0	0	0	0	0
Spot Checks Checklist	0	0	**20**	0	0	0	0	0	0
Catch Basin Grouting Program	0	0	**442**	**442**	**442**	**442**	**442**	**442**	**442**

Table B-9. Required and Recommended Future Activities for Operations and Maintenance (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
Ditch and Culvert Maintenance Program	0	0	0	**442**	**442**	**442**	**442**	**442**	**442**
Staff Training - NaviLine Software	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
Recommended Staffing (Hours)	**180**	**4,520**	**4,982**	**5,504**	**5,404**	**5,404**	**5,404**	**5,404**	**5,404**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
TMDL Record Keeping	Keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s). Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Updated Nutrient Loading Spatial Analysis	No later than December 31, 2027, begin using existing data to conduct spatial analysis of nutrient loading from the MS4. Assumes funding and staff support would be included with the current level of stormwater utility funding.	12/31/2027	☒	☐
Nutrient BMP Implementation	No later than August 1, 2028, develop and implement priority BMPs to minimize the transport of nutrients via the MS4. Assumes funding and staff support would be included with the current level of stormwater utility funding.	8/1/2028	☒	☐
Designate, Screen, and Schedule High Priority Areas	Designate areas discharging via the MS4 to Budd Inlet as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for nutrient sources in 100% of these areas by July 31, 2029, and implement the schedules and activities identified in S5.C.5 of the Phase II Permit in response to any illicit discharges found. Assumes funding and staff support would be included with the current level of stormwater utility funding.	7/31/2029	☒	☐
Budd Inlet Sampling Plan	**Develop a sampling plan for untreated outfalls near Chambers Lake. This sampling plan will focus on routine and storm-event monitoring of the five outfalls near Chambers Lake. Assumes $50,000 of consultant support and 20 staff hours in 2031 to develop the plan.**	**One-time (flexible due date)**	☒	☐
Update Henderson TMDL	Update the Henderson TMDL Coordinated Sampling Plan in 2029 for the 2029-2034 Phase II Permit. Assumes funding and staff support would be included with the current level of stormwater utility funding.	One-time (flexible due date)	☒	☐

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Implement BMPs in Henderson Inlet Discharge Areas	Annually implement best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Phase II Municipal Stormwater Permit. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Implement the Fecal Coliform Bacteria Wet Weather Sampling Program	Continue to implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Phase II Permit. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Communication with City of Olympia	Continue to communicate with the City of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Fecal Coliform Bacteria Sampling	Perform fecal coliform bacteria sampling at the stormwater pipe located on River Mile 3.7 (i.e., Tanglewilde pipe) of Woodland Creek. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Report Temperature Reductions in Deschutes River Watershed	Annually report on temperature reduction measures in the Deschutes River Watershed. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	**Ongoing**	☐	☒

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements (Funding)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Budd Inlet Sampling Plan	$0	$0	$0	$0	**$50,000**	$0	$0	$0	$0
Required Funding	**$0**	**$0**	**$0**	**$0**	**$50,000**	**$0**	**$0**	**$0**	**$0**

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**$0**	**$0**	**$0**	**$0**	**$50,000**	**$0**	**$0**	**$0**	**$0**
Recommended Funding	**$0**	**$0**	**$0**	**$0**	**$50,000**	**$0**	**$0**	**$0**	**$0**

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Budd Inlet Sampling Plan	0	0	0	0	**20**	0	0	0	0
Required Staffing (Hours)	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**

Table B-10. Required and Recommended Future Activities for Total Maximum Daily Load (TMDL) Requirements (Staffing)[d].									
Recommended Future Activity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**
	2027	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Recommended Level of Service[e]									
All activities from the Required Level of Service	0	0	0	0	**20**	0	0	0	0
Recommended Staffing (Hours)	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-11. Required and Recommended Future Activities for Monitoring and Assessment.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Contribution for S8.A	**Continue to make annual payment of $14,545 (by August 15th each year) to the collective fund for S8.A.**	**Ongoing**	☐	☒
Contribution for S8.B	**Continue to make annual payment of $21,527 (by August 15th each year) to the collective fund for S8.B.**	**Ongoing**	☐	☒
Provide SAM project Information	Continue to provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active Stormwater Action Monitoring (SAM) projects. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-11. Required and Recommended Future Activities for Monitoring and Assessment.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	Ongoing	☐	☒
Coordinate Collaborative Monitoring Activities	**Coordinate monitoring activities related to shared facilities (e.g. the Fones Road Stormwater Facilities) or for areas with multiple authorities (e.g. the Woodland Creek basin) with the City of Olympia and Thurston County on an annual basis. Assumes 20 hours of staff time starting in 2027 to continue coordinating across jurisdictions.**	**Ongoing**	☐	☒

Table B-11. Required and Recommended Future Activities for Monitoring and Assessment (Funding)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Contribution for S8.A	**$14,545**	**$14,545**	**$14,545**	**$14,545**	**$14,545**	**$14,545**	**$14,545**	**$14,545**	**$14,545**
Contribution for S8.B	**$21,527**	**$21,527**	**$21,527**	**$21,527**	**$21,527**	**$21,527**	**$21,527**	**$21,527**	**$21,527**
Required Funding	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**

Table B-11. Required and Recommended Future Activities for Monitoring and Assessment (Funding)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**
Coordinate Collaborative Monitoring Activities	$0	$0	$0	$0	$0	$0	$0	$0	$0
Recommended Funding	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**	**$36,072**

Table B-11. Required and Recommended Future Activities for Monitoring and Assessment (Staffing)[d].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[e]									
All activities from the Required Level of Service	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Coordinate Collaborative Monitoring Activities	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**
Recommended Staffing (Hours)	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**	**20**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] Funding estimates were developed in November 2025 and do not include escalation.

[d] The staffing hours presented in this table are in addition to current staffing levels.

[e] The recommended level of service is inclusive of the required level of service.

Table B-12. Required and Recommended Future Activities for Reporting.				
Required Future Activity[a]	**Details**	**Due Date**	**One-Time[b]**	**Ongoing[c]**
Required Level of Service				
Document Updates	Continue to update the SWMP Plan, answer the Annual Report questions, and submit the Annual Report each year. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Record Retention	Continue retaining records for a minimum of five years after the expiration date of the Permit. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-12. Required and Recommended Future Activities for Reporting.				
Recommended Future Activity[a]	**Details**	**Due Date**	**One-Time[b]**	**Ongoing[c]**
Recommended Level of Service				
All activities from the Required Level of Service	Same assumptions as the Required Level of Service.	Ongoing	☐	☒

[a] No additional funding or staffing is proposed for these future activities.

[b] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[c] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

Table B-13. Required and Recommended Future Activities for the Capital Improvement Program (CIP).				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Meet SMED Requirements	**Meet the Stormwater Management for Existing Development (SMED) requirements found in Section S5.C.7 and Appendix 12 of the 2024-2029 Phase II Permit. Assumes 1,768 hours (or 1 FTE) CIP project manager is needed starting in 2027 to support the design and/or construction management of 5-10 stormwater CIP projects per year to meet SMED requirements. The stormwater CIP projects managed by this new CIP project manager position would be transitioned from existing project managers and would not require additional administrative support.**	**Ongoing**	☐	☒

Table B-13. Required and Recommended Future Activities for the Capital Improvement Program (CIP).				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒

Table B-13. Required and Recommended Future Activities for the Capital Improvement Program (CIP) (Staffing)[c].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Meet SMED Requirements	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**
Required Staffing (Hours)	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**

Table B-13. Required and Recommended Future Activities for the Capital Improvement Program (CIP) (Staffing)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[d]									
All activities from the Required Level of Service	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**
Recommended Staffing (Hours)	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**	**1,768**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] The staffing hours presented in this table are in addition to current staffing levels.

[d] The recommended level of service is inclusive of the required level of service.

Table B-14. Required and Recommended Future Activities for the Underground Injection Control (UIC) Rule.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Review Registration of Municipal UIC Wells	Review the status of existing municipally owned UIC wells to ensure they are properly registered with Ecology's UIC Program. This includes UIC wells annexed from Thurston County. Assumes reviewing registration of municipal UIC wells would be covered by inspection staff below.	Ongoing	☐	☒
Identify Class V Wells	Identify any additional UIC Class V wells that predate 2/3/2006 and complete well assessments, if necessary. The well assessments will include information such as the land use around the well which may affect the quality of the discharge and whether the UIC well is located in a groundwater protection area. It may include the local geology and depth of the groundwater in relation to the UIC well. Assumes identifying UIC Class V wells would be covered by inspection staff below.	Ongoing	☐	☒
Annual Inspections of Municipal UIC Wells	**Conduct annual maintenance inspections of municipal UIC wells. Assumes 884 hours (or 0.5 FTE) starting in 2027 to perform annual inspections to meet UIC Rule requirements.**	**Ongoing**	☐	☒
Maintenance of Municipal UIC Wells	Perform maintenance activities on UIC wells when inspections identify an exceedance of maintenance standards. Assumes maintenance would be covered by inspection staff above.	Ongoing	☐	☒
Integrate Municipal UIC Wells into IDDE Program	**Integrate areas served by municipal UIC wells into the Illicit Discharge Detection and Elimination (IDDE) Program as part of routine response activities. Assumes 20 hours in 2027 to determine which areas to include in the IDDE Program and that routine response activities would be covered by existing staffing.**	**One-time (flexible due date)**	☒	☐

Table B-14. Required and Recommended Future Activities for the Underground Injection Control (UIC) Rule.				
Required Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Required Level of Service				
Map UIC Wells	**Create a map of all municipal UIC wells to be used during IDDE spill response activities. Assumes 20 hours in 2027 to create the map and 8 hours per year starting in 2028 to update the map on an annual basis.**	**One-time (flexible due date) and Ongoing**	☒	☐
Provide Comments During Site Review Process	Provide comments during site review process. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒
Private UIC Well Registration	Continue to remind private UIC well owners of the requirement to register all UIC wells with Ecology. Assumes funding and staff support would be included with the current level of stormwater utility funding.	Ongoing	☐	☒

Table B-14. Required and Recommended Future Activities for the Underground Injection Control (UIC) Rule.				
Recommended Future Activity	**Details**	**Due Date**	**One-Time[a]**	**Ongoing[b]**
Recommended Level of Service				
All activities from the Required Level of Service	**Same assumptions as the Required Level of Service.**	**Ongoing**	☐	☒

Table B-14. Required and Recommended Future Activities for the Underground Injection Control (UIC) Rule (Staffing)[d].									
Required Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Required Level of Service									
Annual Inspections of Municipal UIC Wells	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**	**884**
Integrate Municipal UIC Wells into IDDE Program	**20**	0	0	0	0	0	0	0	0
Map UIC Wells	**20**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
Required Staffing (Hours)	**924**	**892**	**892**	**892**	**892**	**892**	**892**	**892**	**892**

Table B-14. Required and Recommended Future Activities for the Underground Injection Control (UIC) Rule (Staffing)[c].									
Recommended Future Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recommended Level of Service[d]									
All activities from the Required Level of Service	**924**	**892**	**892**	**892**	**892**	**892**	**892**	**892**	**892**
Recommended Staffing (Hours)	**924**	**892**	**892**	**892**	**892**	**892**	**892**	**892**	**892**

[a] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[b] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[c] The staffing hours presented in this table are in addition to current staffing levels.

[d] The recommended level of service is inclusive of the required level of service.

Table B-15. Additional Outside Costs Summary by Program Area, Year, and Level of Service[a].

Program Area	Level of Service[b]	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
		2027	2028	2029	2030	2031	2032	2033	2034	2035	
Stormwater Planning	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Public Education and Outreach	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	**$9,000**
Public Involvement and Participation	Required	$0	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	**$80,000**
	Recommended	$0	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	**$80,000**
MS4 Mapping and Documentation	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$10,000	$0	$0	$0	$0	**$10,000**
Illicit Discharge Detection and Elimination	Required	$0	$5,000	$0	$0	$0	$0	$0	$0	$0	**$5,000**
	Recommended	$0	$5,000	$0	$0	$0	$0	$0	$0	$0	**$5,000**
Controlling Runoff from New Development, Redevelopment, and Construction Sites	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$5,000	$0	$0	$20,000	$20,000	$0	$0	**$45,000**
Stormwater Management for Existing Development	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Source Control Program for Existing Development	Required	$0	$0	$2,000	$0	$0	$2,000	$0	$0	$2,000	**$6,000**
	Recommended	$0	$0	$2,000	$0	$0	$2,000	$0	$0	$2,000	**$6,000**
Operations and Maintenance	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$15,000	$615,000	$615,000	$1,565,000	$815,000	$815,000	$815,000	$815,000	$815,000	**$6,885,000**
TMDL Requirements	Required	$0	$0	$0	$0	$50,000	$0	$0	$0	$0	**$50,000**
	Recommended	$0	$0	$0	$0	$50,000	$0	$0	$0	$0	**$50,000**
Monitoring and Assessment	Required	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	**$324,648**
	Recommended	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	$36,072	**$324,648**

Table B-15. Additional Outside Costs Summary by Program Area, Year, and Level of Service[a].											
Program Area	**Level of Service[b]**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Total**
		2027	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	
Reporting	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Capital Improvement Program (CIP)	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Underground Injection Control (UIC) Rule	Required	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
	Recommended	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Total	**Required**	**$36,072**	**$51,072**	**$48,072**	**$46,072**	**$96,072**	**$48,072**	**$46,072**	**$46,072**	**$48,072**	**$325,432**
	Recommended	**$57,072**	**$662,072**	**$669,072**	**$1,612,072**	**$922,072**	**$884,072**	**$882,072**	**$862,072**	**$864,072**	**$4,806,432**

[a] Funding estimates were developed in November 2025 and do not include escalation.

[b] The recommended level of service is inclusive of the required level of service.

Table B-16. Additional Staff Hours Summary by Program Area, Year, and Level of Service[a].

Program Area	Level of Service[b]	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
		2027	2028	2029	2030	2031	2032	2033	2034	2035	
Stormwater Planning	Required	40	80	0	0	160	40	0	0	0	**320**
	Recommended	60	100	20	20	180	60	20	20	20	**500**
Public Education and Outreach	Required	0	40	0	100	0	0	0	0	0	**140**
	Recommended	20	120	100	160	80	60	60	60	60	**720**
Public Involvement and Participation	Required	0	884	884	884	884	884	884	884	884	**7,072**
	Recommended	80	924	1,004	924	924	924	924	924	924	**7,552**
MS4 Mapping and Documentation	Required	0	0	0	0	0	0	0	0	0	**0**
	Recommended	80	80	462	60	60	60	60	60	60	**982**
Illicit Discharge Detection and Elimination	Required	20	60	20	120	20	20	20	20	20	**320**
	Recommended	20	100	20	120	20	20	20	20	20	**360**
Controlling Runoff from New Development, Redevelopment, and Construction Sites	Required	1,768	1,808	1,768	1,768	1,768	1,768	1,768	1,768	1,768	**15,952**
	Recommended	1,768	1,808	1,868	1,768	1,768	1,868	1,868	1,768	1,768	**16,252**
Stormwater Management for Existing Development	Required	0	0	0	0	0	0	0	0	0	**0**
	Recommended	0	0	0	0	0	0	0	0	0	**0**
Source Control Program for Existing Development	Required	0	0	0	0	0	0	0	0	0	**0**
	Recommended	100	100	100	100	100	100	100	100	100	**900**
Operations and Maintenance	Required	40	3,536	3,536	3,536	3,536	3,536	3,536	3,536	3,536	**28,328**
	Recommended	180	4,520	4,982	5,504	5,404	5,404	5,404	5,404	5,404	**42,206**
TMDL Requirements	Required	0	0	0	0	20	0	0	0	0	**20**
	Recommended	0	0	0	0	20	0	0	0	0	**20**
Monitoring and Assessment	Required	0	0	0	0	0	0	0	0	0	**0**
	Recommended	20	20	20	20	20	20	20	20	20	**180**
Reporting	Required	0	0	0	0	0	0	0	0	0	**0**
	Recommended	0	0	0	0	0	0	0	0	0	**0**
Capital Improvement Program (CIP)	Required	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	**15,912**

Table B-16. Additional Staff Hours Summary by Program Area, Year, and Level of Service[a].											
Program Area	**Level of Service[b]**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Total**
		2027	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	
	Recommended	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	**15,912**
Underground Injection Control (UIC) Rule	Required	924	892	892	892	892	892	892	892	892	**8,060**
	Recommended	924	892	892	892	892	892	892	892	892	**8,060**
Total	**Required**	**4,560**	**9,068**	**8,868**	**9,068**	**9,048**	**8,908**	**8,868**	**8,868**	**8,868**	**76,124**
	Recommended	**5,020**	**10,432**	**11,236**	**11,336**	**11,236**	**11,176**	**11,136**	**11,036**	**11,036**	**93,644**

[a] The staffing hours presented in this table are in addition to current staffing levels.

[b] The recommended level of service is inclusive of the required level of service.

Table B-17. Additional Outside Costs and Staff Hours Summary by Program Area and Level of Service.

Program Area	Level of Service[a]	One-Time[b]		Ongoing[c]	
		Funding[d]	Staff Support (hours)[e]	Funding	Staff Support (hours/year)[e]
Stormwater Planning	Required	$0	120	$0	0
	Recommended	$0	120	$0	20
Public Education and Outreach	Required	$0	140	$0	0
	Recommended	$0	220	$1,000	60
Public Involvement and Participation	Required	$0	0	$0	0
	Recommended	$0	160	$0	40
MS4 Mapping and Documentation	Required	$0	0	$0	100
	Recommended	$10,000	602	$0	160
Illicit Discharge Detection and Elimination	Required	$5,000	140	$0	20
	Recommended	$5,000	180	$0	20
Controlling Runoff from New Development, Redevelopment, and Construction Sites	Required	$0	40	$0	1,768
	Recommended	$45,000	340	$0	1,768
Stormwater Management for Existing Development	Required	$0	0	$0	0
	Recommended	$0	0	$0	0
Source Control Program for Existing Development	Required	$0	0	$0	0
	Recommended	$0	0	$0	100
Operations and Maintenance	Required	$0	40	$0	3,536
	Recommended	$850,000	200	$815,000	5,404
TMDL Requirements	Required	$0	0	$0	100
	Recommended	$0	0	$0	0
Monitoring and Assessment	Required	$0	0	$36,072	0
	Recommended	$0	0	$36,072	20
Reporting	Required	$0	0	$0	0
	Recommended	$0	0	$0	0
Capital Improvement Program (CIP)	Required	$0	0	$0	1,768
	Recommended	$0	0	$0	1,768

Table B-17. Additional Outside Costs and Staff Hours Summary by Program Area and Level of Service.					
Program Area	**Level of Service[a]**	**One-Time[b]**		**Ongoing[c]**	
		Funding[d]	**Staff Support (hours)[e]**	**Funding**	**Staff Support (hours/year)[e]**
Underground Injection Control (UIC) Rule	Required	$0	40	$0	892
	Recommended	$0	40	$0	892
Total	**Required**	**$5,000**	**520**	**$36,072**	**8,184**
	Recommended	**$910,000**	**1,862**	**$852,072**	**10,252**

[a] The recommended level of service is inclusive of the required level of service.

[b] One-time activities are completed once, such as hiring a consultant to develop new training materials.

[c] Ongoing activities occur every year, such as continuing an inspection program or annual review of procedures.

[d] Funding estimates were developed in November 2025 and do not include escalation.

[e] The staffing hours presented in this table are in addition to current staffing levels.

Appendix C

Stormwater Management Program Gap Analysis Questionnaires

HERRERA
Science + Planning + Design

City of Lacey
Stormwater Management Comprehensive Plan
Stormwater Plan Review and Construction Inspections
Workshop #1 Notes

Workshop #1 Focus: Workshop #1 focused on the following Phase II Permit topics:

- Stormwater Planning
- Controlling Runoff from New Development, Redevelopment, and Construction Sites (specifically Stormwater Plan Review and Construction Inspections)

Color Key

Written responses were submitted in advance of the workshop by the following:

DC = Doug Christenson
RY = Royce Young
DyC = Dylan Call
JE = Joseph Etter

General notes from the 1/28/25 workshop are included in blue

Attendees at the 1/28/25 workshop included:

Doug Christenson (City of Lacey)
Royce Young (City of Lacey)
Dylan Call (City of Lacey)
Joseph Etter (City of Lacey)
Rebecca Dugopolski (Herrera)
Citlali Ramirez (Herrera)

Overall

1. What are the City's top issues with surface water and stormwater management?

   (DC)
   Maintenance of privately-owned storm facilities, particularly in residential plats.
   Increasing requirements for stormwater programs from the municipal permits.
   Minor localized flooding during the wet season.
   Annexation of County areas with inadequate/substandard drainage facilities.
   Proper construction of permanent BMPs (crummy CB grout, inadequate riprap, etc.).

   (RY)
   Lack of cooperation from other departments when it comes to making changes so we can be in compliance with the permit.

Areas of localized flooding (Pattison Dr, Golf Club, Lacey Street)
Not enough staff for maintenance activities.
Annexing horribly maintained facilities
Not enough staff for stormwater projects
Stormwater Facilities not being built correctly

(DyC) Enforcement of rules and holding people accountable

(JE)
Surface Water – Many parcels/homes around the local lakes are currently utilizing old and outdated on-site septic systems. Connecting those parcels to the City's sanitary sewer system would be beneficial.
Stormwater Management – Ensuring that stormwater facilities are constructed, maintained, and functioning properly. Monitoring and resolving the contamination of stormwater runoff from substandard sites that are outdated or undeveloped.

The team looks at a site and works hard to get plans to meet standards but plans are not being constructed properly – inadequate from the gate for the client
Inspection turnover for private development – old regime was more hands off for private stormwater
Proper maintenance requires more staffing

2. What are the City's priorities for water quality and resource protection (what resources or waterbodies)?

(DC) All surface waters and groundwater, but especially the Woodland Creek drainage system, including the connected lakes, and groundwater in WHPAs.

(RY)
To protect local waterbodies from addition pollution from stormwater runoff.
To retrofit areas that don't have treatment and to reduce flooding. All of our surface and drinking water.

(DyC) Only rain down the drain

(JE) Groundwater (wellhead protection areas and critical aquifer recharge areas) and surface waters (wetlands, lakes, creeks, streams, and saltwater)

Woodland Creek and some lakes

3. What elements of the current stormwater plan review and construction inspection program/approach work well?

   (DC) We have multiple staff looking at plans, mostly now via Bluebeam so we can see each other's comments, and although each staff person is focused on their specialty, anything amiss can be highlighted for further review.

   (RY) Plan reviews are getting better. We now have multiple people look at the plans. Due to recent issues found during a warranty period walk through

   (DyC) The people who care

   (JE) The stormwater plan review and approval process for private development projects seems to work pretty well. Routing the plans to internal stakeholders for review through a Bluebeam Studio Session is an effective way to collect review comments. The Studio Session also allows stakeholders to see each other's review comments and provide related feedback if necessary. The construction inspection process for stormwater structures and pipe conveyance systems seems to work well.

   Everyone getting involved in Bluebeam and participating in the review has been positive. It is a good hub for all comments
   Private development inspectors are more focused than in the past

4. What elements of the current stormwater plan review and construction inspection program/approach do not work well and what changes are needed?

   (DC) Our development inspectors have tended to prioritize water/sewer/street improvements over stormwater, since storm typically becomes the parcel-owner's responsibility. Also, transfer of the Maintenance & Source Control Manual to the new owner/HOA could be improved.

   (RY)
   Lack of communication between the inspector (Dylan) and the stormwater section. We have no idea what is going on with construction.
   Our enforcement actions could be improved. Right now, monetary penalties are only $100 a day. It is cheaper to take the penalty then get into compliance.

Wet weather SWPPPs are new and not really being implemented on projects. We need to insist for this to be a requirement to working during the wet season.

(DyC) Everybody works in a vacuum. We don't know what each other does.

(JE) It would be beneficial for the Development Review Specialists (and possibly other staff members) to have more extensive training regarding the use of software programs such as WWHM, MGS Flood, MODFLOW, and MODRET. It seems like it would be beneficial for Public Works Construction Inspectors (Development Review) to have a better understanding of some of the elements that are associated with storm drainage facilities (especially LID BMP's).

Dealing with projects in urban growth area outside of City limits in Thurston County area – annexing property, so may need to start inspecting projects in areas we plan on annexing to ensure the City does not inherit facilities that are substandard
Have not spoken to the County about this
There are different local stormwater design manuals, but they are similar
The Ecology Stormwater Manual is minimum guidance

5. Are there any major roadblocks to execution of any current or upcoming stormwater plan review and construction inspection program components?

(DC)
Rapid growth in population and area (annexations), and lots of new construction, plus more difficult sites, and more complex regulations = longer review time needed – but limitations in staff and new state requirements for expedited review are making it harder. Also, we are lacking an inspector for SWPPPs/TESC on public/CIP projects, but will be adding a staff position to address this in 2025.
New hire in process

(RY)
Capital projects are not being inspected for erosion and sediment controls and there is push back from inspectors and management.
Lack of staff to manage stormwater projects.

(DyC) Yes, can't enforce part of the code

More difficulty in developing certain sites
Staffing levels hard to keep up with regulation

State Bill 5290 puts the City on a strict timeline (65 days)
Built in mechanisms to buy time
28 days to determine if plans are complete, then 65 days start
When resubmitting, 14 days to determine if its complete
10 different options
If City can meet 3, then they do not need to adhere to the bill for 10 years (time for them to work out the kinks – not as strict as it appears)
Lacey does meet 3 of these options
If don't meet timeline, may need to pay part of the time check fee
Struggling with monitoring and tracking time because of TRAKiT system – not good support staff from the company
Internal coordination is good, but working with County might be tricky with this bill

Staffing and Resources

6. Approximately how much staff time (FTEs) are allocated to the stormwater plan review and construction inspection program? Is any of this work contracted out? If so, how much of this work is contracted out?
Plan review is short staffed, so other positions are working overtime

Permit/SWMP component	Staff time	Contractor time
Stormwater Planning		Some, e.g., Herrera/SCP
Stormwater Plan Review	2002 staffing levels (2 fulltime); had 4 at peak. Requests for additional positions have been denied.	None
Private Construction Stormwater Site Inspections	Adequate 4 FTE (infrastructure only) 1 FTE (erosion and sediment)	None
Public Construction Stormwater Site Inspections	4 FTE (infrastructure) 1 FTE (erosion and sediment in 2025)	Typically none
Other:		

Stormwater Planning

Interdisciplinary Team

7. How frequently does the interdisciplinary team meet? When was the last meeting of the City's interdisciplinary team?

(DC) As a whole team, we meet during comprehensive plan development, so last time was in 2020. But we have frequent discussions with individuals from various department, to address more immediate questions and issues. Lots of small-group interactions, focused on specific development projects, etc.

(RY) As far as I know it only happens when we have a stormwater comp plan update. This would be much easier if folks were more willing to work together as a team instead of the us vs them mentality.

Whole group for comp plan
Small partial groups as needed

8. Should any new members be added to the interdisciplinary team?
   (DC) They have been and will continue to be, as staff changes occur. We currently have reps from all the departments that are invested in aspects of our SCP.

Long-range Plan Updates

9. What current or upcoming long-range planning efforts are anticipated to occur over the next year?
   (DC) The overall Lacey Comprehensive Plan update is in progress, with similar timing as the SCP.

   (RY) We will be working on the CED Planning to update policies in the utility chapters of the City's Comp Plan. This includes Stormwater, Water quality, and Land Use

   Climate resilience project has an interdisciplinary group
   Unknown timeline, in early stages.
   Related to Citywide comp plan - may get folded in or may be stand alone

10. How are stormwater management needs and protection/improvement of receiving water health informing/influencing those updates?
    (DC) It is generally taken into account, with goals and policies that align, and have always been supported by City management and Council.

Identifying Barriers to Low Impact Development

11. Do you review new municipal code and enforceable documents to determine if there are any administrative or regulatory barriers to low impact development?

a. How frequently is this review completed?

(DC) Yes, we monitor changes and needed changes to the LMC, though formal reviews are not conducted on a regular schedule.

Biggest barrier - Ecology doesn't require LID in a strong enough way
Can meet LID standards without incorporating any LID BMPs
Loopholes

b. What is the process for updating code and/or enforceable documents if barriers are identified?

(DC) Basically, staff would draft proposed code wording, discuss internally, present to our Planning Commission, who would make recommendation to City Council.

Tree Canopy Goals and Policies

12. Has the City discussed the process or potential barriers for updating tree canopy goals and policies to support stormwater management?

(DC) We have an Urban Forest Management Plan, but tree canopy as a stormwater management tool is problematic, since most of our annual rainfall is in Nov-Jan when leaves fall and clog CB grates.

(RY)
We are in the process of gathering data from the following websites:

- https://www.treeequityscore.org/map#3.8/37.22/-98.75
- https://data.fs.usda.gov/geodata/rastergateway/treecanopycover/
- https://gfw.global/4iP2xsi
- https://canopy.itreetools.org/map#

We are looking into getting another DNR grant to do another tree canopy assessment.
There are also AI layers on NearMap that can be used on the tree canopy assessment

Cooling water using tree canopy is the biggest benefit (temperature TMDL), not necessarily interception of rain (clogs drains and maintenance required)
Tug of war between long range planning street corridor vision and Public Works maintenance of trees
Arterial roadway trees used to be City responsibility but want to put the maintenance on owners due to staffing issues
Urban forestry has created a list of trees that prevent common problems

Stormwater Management Action Planning (SMAP)

13. Has the City decided whether they are planning on updating the City's existing SMAP or developing a new SMAP for another priority catchment?
    (DC) We will probably update our existing SMAP, which listed multiple potential retrofit sites.

    There is one main drainage that runs through town with individual catchments along it (80% surface flow goes through here). The SMAP addressed that as a priority with various sites within it. Can build off this instead of starting over.

Controlling Runoff from New Development, Redevelopment, and Construction Sites

Stormwater Plan Review

14. What type and quantity of development has occurred in the City over the last 10 years?
    (DC) Lots, especially large warehouses and multifamily multi-building developments. Very little redevelopment, and residential plats are mowing down forested land in our UGA.

    (RY) Warehouses, apartment complexes, single family homes.
    (JE) In order of the greatest quantity to the least quantity, the main types of private development include single-family residential subdivisions, multi-family residential, commercial, and industrial.

    Tree cutting in UGA and a lot of greenfield development going on
    Lending interest rates have slowed down warehouse development
    Multifamily and single family is biggest development
    Some hotels and commercial
        Near casino
    Small lots – having trouble providing services
        Infiltration challenges
        Not considering functionality
    Middle housing ADUs
        Taking single family and making multifamily
        Allowing ADUs on other lot types

15. What type of development is expected in the next 10 years?

(DC) City is about out of undeveloped land, so we are seeing new development in greenfields in the UGA which is annexed into the city for services. Perhaps more redevelopment could occur in-city.

(RY) Commercial it looks like. May be some middle housing and ADUs

(DyC) Infill/redevelopment

(JE) Though the associated quantities will probably fluctuate, the main types of private development (as listed above in Question 14) will probably remain the same.

Housing

16. Describe the stormwater plan review process.

(DC) The stormwater engineer/drainage manual administrator in PW-Water Resources reviews during land-use to ensure proposed projects can meet the manual; we require a 90%-complete stormwater site plan for land-use approval. Then when civil plans are submitted for construction, our PW-Development Review team does the detailed review, with each project assigned to a particular reviewer.
(RY) There are several steps to this review process. Doug does most of the heavy lifting during land use review. I know Joey/ Tom Stiles does most of the civil review and then it is sent to us through Bluebeam to make comments final comments.

(DyC) Grading permit is submitted, I review it alone for grading and erosion control, request revisions and or stamp and approve.

(JE)

- Electronic and hard copies of the stormwater plans are submitted for review. If the plans are generally in compliance with the City's plan checklist, they will be routed to internal stakeholders for review. Hard copies of the plans are placed in plan holds and an electronic copy of the plans is routed through a Bluebeam Studio Session. Internal stakeholders are typically given a timeline to complete their reviews. In conjunction with the reviews that are being performed by the internal stakeholders, the assigned Development Review Specialist also performs their own review of the plans. The Development Review Specialist uses Bluebeam to ultimately combine all review comments in a red lined copy of the stormwater plans. The red lined copy of the plans is then sent electronically to the Engineer

of Record and the project's applicant. Once revised plans have been submitted, a second review is performed by the Development Review Specialist to ensure that all review comments have been adequately addressed. Depending on the nature of the initial plan review comments, the Development Review Specialist may also consult some of the internal stakeholders during the second plan review process. From this point, it is rinse and repeat until the plans are ready to be approved for construction.

- The review of the project's associated Drainage Control Plan Report is also an important part of the stormwater plan review process. The report should be included with the stormwater plans when they are routed for internal review as noted above.

Getting more efficient and getting better

Bluebeam is good for plan routing and comment consolidation

Too much faith in engineers and developers to make changes based on conditions made during land use approval - may need to be more stringent on land use

Not consistent on giving a second opportunity at reviewing plans currently

Counterpart in planning would like this especially for redesign and other significant changes

There is a checklist in place, but staff use it differently

17. How does the City verify facility performance during plan review (e.g., modeling, calculations, professional judgment)?

(DC) Design must follow City standards; the proponent's design engineer and geotechnical consultant provide report and calculations, which Development Review checks.

(RY) I believe Doug reviews this during the land use review.

(DyC) I don't do that. What I do is make sure that I verify the facility works after construction only if I have reasonable evidence that it wasn't protected during construction. This [is] challenging.

(JE) This happens through the concurrent review the project's Drainage Control Plan Report. The report includes the technical analysis and information (e.g., modeling, calculations, professional judgement, etc.) that is required to verify that the applicable storm drainage improvements are meeting the City's design standards. It is important to verify that the stormwater plans are ultimately in agreement with the information that is accepted/approved in the Drainage Control Plan Report.

Sizing infiltration trenches for residential done by Dylan
For bigger commercial projects, sizing, etc. is done earlier in the process
Joey checks their work (self-trained on WWHM – formal training to come) with collaboration and feedback from Doug
Unsure how much detail his counterpart and boss check
Mike runs the modeling

18. Has the City developed checklists or other tools (e.g., sizing tables) to help reviewers with the stormwater plan review process? Would reviewers benefit from additional checklists/tools that could increase efficiency?
(DC) Yes, checklists have been developed but generally are not used. All of the main reviewers have many years of experience so they know what to check. We have a drainage report template which follows our preferred format/contents per the 2022 SDM, and serves as a sort of checklist to make sure all stormwater site plan elements are addressed.

(RY) I plan to take WWHM training to get to know the modeling. I'm unsure if anyone else is familiar with this modeling program. I know Doug has a spreadsheet he keeps track of his reviews with.

(JE) There are some checklists, tables, flow charts, and details currently provided in the City of Lacey 2022 Stormwater Design Manual and the City of Lacey 2017 Development Guidelines & Public Works Standards. As I previously stated in Question 4, the applicable reviewers being adequately trained in the use of software programs such as WWHM, MGS Flood, MODFLOW, and MODRET would be beneficial and allow the stormwater plan review process to be more efficient.

Checklists are available but not required
Review process is not codified – not everyone is doing things the same way
Senate Bill 5290 may change some things – developing more checklists
Dylan focuses on sediment and erosion and grading plans

19. Are there expected annexations in the next few years? If so, how do you expect that to influence staffing?
(DC) Yes, annexations are ongoing, and in fact a study is underway regarding potential annexation of our entire UGA. Staff is being stretched thin by the annexation of areas with substandard/inadequate infrastructure, especially for maintenance.

(RY) We just annexed an area off 15th NE. From what I hear. We may annex the Martin Way corridor in the next few years.

(DyC) Yes, we are already understaffed it feels like.

(JE) The City has recently been pretty active with annexations. Though I anticipate annexations continuing, I am not sure to what extent.

20. Have you had any challenges in implementing the 2022 Lacey Stormwater Design Manual?
    a. Are there any common issues noted during stormwater plan review that could be addressed through fact sheets or addenda/errata to the 2022 Lacey Stormwater Design Manual?

       (DC) The stormwater engineer/drainage manual administrator keeps notes in a printed copy of the 2022 SDM, with potential improvements/clarifications to address with the next SDM update. Some Lacey-specific detail drawings would help, e.g. for infiltration galleries as multi-lateral trenches

       (RY) Wet Weather SWPPP. We need to get both Capital Projects and Development projects on board to take additional measures during the wet season.

    Chapter 5 and 7 used most by Dylan
        Construction plans may not have geotech
        Ch 5 – checking that there are BMPs
    Big trench w multiple laterals rather than arch structures proposed
        Not good detail
    Wet weather SWPPP – hard to work through the winter (Nov-Jan especially)
        Some sites don't infiltrate well
        Some conflicting/unclear communication about this
            - Terry is going to let them work through winter unless specifically told clearly that they cannot due to infiltration rate etc.
            - Some information is not easily accessible (TRAKiT or notes) to mark potentially challenging sites

    b. Are there any common issues noted during stormwater plan review that could be addressed through training?

       [Not discussed]

21. Describe the City's stormwater site plan review training.
    a. What is the frequency of training?

       (DC) Seldom. We've had the same four main reviewers for 20 years, so they know how to review. SDM training is conducted with updates and changes.

    b. Where is training documented?

       [Not discussed]

    c. How can the training process be improved?

       WWHM, MGSFlood, MODFLOW, and other software training would be helpful for checking the work

Private Construction Stormwater Site Inspections

22. Who inspects permitted development sites prior to, during, and post- construction?
    (RY) Dylan Call (preconstruction) – only erosion control

    (JE) During construction, stormwater improvements are inspected by Public Works Construction Inspectors (Development Review). When construction is complete, walk-through inspections are performed (by Operations and Water Resources staff) prior to the project being granted Final Public Works Approval. Post-Construction, one-year walk-throughs are performed by Operations and Water Resources staff with the repair of any deficiencies being overseen and inspected by the Public Works Construction Inspectors (Development Review). Though staff from Water Resources has not always been included in the walk-throughs, I believe they are now included. This will need to be verified with Doug and/or Royce.

    Stormwater improvement – Joey's team (preconstruction)
    Punch list for post construction inspection implementation to avoid problems during warranty phase

23. Are there any erosion and sediment control measures that you commonly see not being implemented correctly?
    (DyC) Yes, a lot of them are often not correctly implemented.

    No BMPs
    Verifying that inspections are taken care of, but the inspector cannot recommend or tell site staff what to do because the inspector is not the designer. If no one is managing a site, they may require more guidance for management.
    They have SWPPP and CESCL, but not strong adherence
    Enforcement is lacking, so people are getting away with things
    Shutting down jobs not really an option most of the time unless compounding issues

24. What is the enforcement process when they are not implemented correctly?
    (DC) Lacey has always preferred to work with contractors/owners using education rather than punishment, unless they have recurring issues or are uncooperative.

    (DyC) There is no enforcement process that is currently adopted. Its whatever I can do to gain compliance. Warning after warning. We do not ever want to shut a job down, I would never get okayed to do so. Fines are out of the question as well. The city attorneys office don't find it a priority.

25. What type of tracking/recordkeeping is performed for inspections (e.g., hard copy inspection forms, electronic forms, notes)? What would make documentation easier?
    (DyC) I use software called TRAKiT, which is what all the building inspectors use. I create most of my own inspection and it is completely at my digression

    (JE) The Public Works Construction Inspectors (Development Review) enter their daily inspection logs and punch list/corrective items into a cloud-based software called Virtual Project Manager.

26. Are you achieving at least 80% of your scheduled construction-related inspections each year? If no, what would make it easier to meet this requirement?

    (DyC) I don't have a minimum inspection limit. If I had less plans to review, I could go on more inspections.
27. Describe the City's construction site inspection training.
    a. What is the frequency of training?

(JE) I don't know the frequency, but it does not seem to be often for the Public Works Construction Inspectors (Development Review).

b. Where is training documented?

[Not discussed]

c. How can the training process be improved?

(JE) Though I don't really have an answer to this question, I think that training should at least be made a priority if certain inspection deficiencies are consistently an issue.

28. Describe the City's enforcement process when construction stormwater site controls are not implemented correctly.
    a. How frequently is enforcement implemented for construction stormwater site issues?

    [Not discussed]

    b. Is there an inspection and/or enforcement SOP?

    [Not discussed]

Public Construction Stormwater Site Inspections

29. Who inspects City development sites prior to, during, and post- construction?
    (RY) Right now, no one inspects this. Our inspectors may note track-out, but they are not looking at all the BMPs and erosion on site. We are hiring someone to do that, hopefully soon.

30. What type of tracking/recordkeeping is performed for inspections (e.g., hard copy inspection forms, electronic forms, notes)? What would make documentation easier?
    [Not discussed]

Wrap-up

31. Is there anything else that you do related to surface water or stormwater that we did not ask about?
    (DyC) Everyone in stormwater is in Public Works except me.

City of Lacey
Stormwater Management Comprehensive Plan
Stormwater Management Program (SWMP)
Workshop #2 Notes

Workshop #2 Focus: Workshop #2 focused on the following Phase II Permit topics:

- Public Education and Outreach
- Public Involvement and Participation
- Stormwater Management for Existing Development (SMED)
- Source Control Program for Existing Development

Color Key

Written responses were submitted in advance of the workshop by the following:

AB = Ali Brown

RY = Royce Young

BC = Brian Caughlan

General notes from the 1/29/25 workshop are included in blue

Attendees at the 1/29/25 workshop included:

Doug Christenson (City of Lacey)
Royce Young (City of Lacey)
Ali Brown (City of Lacey)
Brian Caughlan (City of Lacey)
Rebecca Dugopolski (Herrera)
Citlali Ramirez (Herrera)

Overall

1. What are the City's top issues with surface water and stormwater management?

   (BC) I am unsure what Lacey's top issue is, for my section it is making sure no hazardous waste enters our stormwater system. However, our largest issue is just our staffing. It is very hard for us to do what all is necessary.

2. What are the City's priorities for water quality and resource protection (what resources or waterbodies)?

(BC) Our biggest priorities are Woodland creek and Woodard creek along with their associated watersheds. These make up vast majority of our runoff impacts.

3. What elements of the current stormwater management program/approach work well?
   (AB) Our current team is great at communicating, working together to address gaps in our city.

   (BC) All the ones we are implementing. Our program has grown significantly over the last year, and as we have grown we have understood what we need to accomplish. We have a Source Control, HOA, and Private Infrastructure program that are all getting more efficient by the day.

4. What elements of the current stormwater management program/approach do not work well and what changes are needed?

   (AB) We need more personnel.

   (BC) We just need more bodies, but ideally, we would get increased staffing along with additional aid from other departments as the permit applies to Lacey as a whole, not just the Water Resources Dept.

5. Are there any major roadblocks to execution of any current or upcoming stormwater management program components?

   (RY) Yes, the lack of cooperation from other departments when it comes to change.

   (BC) Not that I am aware of. Aside from the obvious staffing issue, we all are given the resources and training we need to get our jobs done.

Staffing and Resources

6. Approximately how much staff time (FTEs) are allocated to the SWMP? Is any of this work contracted out? If so, how much of this work is contracted out?

Permit/SWMP component	Staff time	Contractor time
Stormwater Planning		
Public Education and Outreach	.8	
Public Involvement and Participation	.15	0.05
Stormwater Management for Existing Development (SMED)	1 FTE	
Source Control Program for Existing Development		
Other:		

Public Education and Outreach Program

7. Which programs and stewardship opportunities are most successful? How do you know?

   (AB) Events hosted in the city's public spaces around habitat restoration have been incredibly successful during my time with the City. I have had hundreds of volunteers show up to remove invasive plant species from parks on more than one occasion. The largest issue I have had with managing these kinds of opportunities is that the maintenance of these spaces falls outside of our stormwater department (Parks). I work very closely with Parks maintenance and Parks and Rec to organize and host such events. Identifying riparian areas in need of restoration (planting, invasive removal, erosion control) in other areas of the City would be beneficial to expanding the number of opportunities available to our community.

8. Which programs and stewardship opportunities are least successful? How do you know?

   (AB)

   - I have not worked on any unsuccessful programs or stewardship opportunities in Lacey (yet). I do see that a lot of stewardship I am supporting is focused on parks, and would like to identify riparian areas or other critical habitat areas to host stewardship events.
   - The future Greg Cuoio Park could be an excellent site for such work and could also open doors to additional educational opportunities. Salmon Stewards (a Stream Team program) could provide volunteer opportunities for stewards, as well as information to visitors during fall chum runs, for example. This site is not currently "open" to the public.

- Important work in riparian areas
- Could be communicated to City planning as the project grows and emphasize this is important for the image of the City too
- Downstream from primary drainage route (Woodland Creek), some comparative monitoring could be done here and upstream on the creek – lots of opportunity for more events
- Metropolitan Parks District helps with volunteering and stewardship?
  - Requires coordination

9. What additional programs and stewardship opportunities is the City considering for 2025?

   (AB)

   - We will be hosting 4 new stormwater workshops in 2025, beginning with our Habitat at Home Workshop on February 15th. We will host additional workshops quarterly, which will include subject matter pertaining to private stormwater facility maintenance, vegetation maintenance and alternatives, water conservation, business pollution prevention topics, and more.
     - First workshop is in coordination with WA Department of Fish and Wildlife and regional partners – each jurisdiction hosts their own workshop with specific target audience
       - Lacey's target audience is residential community members
       - Yelm's target audience rural community members
       - Other workshops will be focused on multifamily dwellings and apartments
   - A new stormwater-focused hands-on science program will begin in February, monitoring amphibian egg masses in a city-owned pond.
   - Additional opportunities in Lacey for underserved communities will be featured throughout the year, and include stream bug monitoring in Woodland Creek, riparian restoration along Woodland Creek, and additional stewardship opportunities with local youth groups in Lacey.

   (RY) We are adding a new Water Resources workshop this year. Each one will be focused on different topics and audiences.

10. Do you have a written plan that defines your public education and marketing strategy for the overall program?
    (AB)
    - Yes and no. Most of the work done for public education and marketing is defined by the annual workplan created by the Regional Environmental Education Partnership. We are finalizing this workplan this week. A written plan for our upcoming behavior change campaign (Adopt a Drain) will be finalized upon completion of onboarding with the project sponsor, Hamline University.
    - There is no written plan that defines the other work in E&O, beyond what I have written since beginning this work at the end of 2023. The scope of this work continues to grow (beyond 1 FTE), so a comprehensive evaluation, or plan, that defines all efforts may shed light on programmatic needs and gaps in coverage.

    - Additional support for Ali: water resources assistants
        - Previously internship – now they are assistantships which do not require matriculated students
        - 16hr/week, no benefits, 2-year term
        - Good opportunity, but fairly limited – no open positions for apprentices to transition to full time
        - A lot of their time is spent on acquiring training and onboarding
        - High turnover due to limited term
        - Having another FTE would be helpful

11. What opportunities exist for interjurisdictional cooperation?
    (AB)
    - Approximately 60% of the education and outreach done in the City of Lacey is done through an interlocal agreement, which forms the Regional Environmental Education Partnership (REEP). REEP consists of the Cities of Lacey, Olympia, and Tumwater, as well as Thurston County. This ILA directs resources to region-wide hands-on science, stormwater education, and stewardship events.
        - First agreement was signed in ~2013
    - Lacey also has an ILA with Thurston Conservation District to aid in distribution of K-12 stormwater and water quality education. Their program South Sound Green provides many field trip and classroom opportunities throughout the North Thurston School District.
        - Financial contribution and staff time (Ali and assistants) help facilitate fieldtrips

12. What barriers exist to interjurisdictional cooperation?

(AB) The scope of work for the REEP partnership is based on each municipality's population size. With Lacey's rapid growth, our share of responsibilities through this agreement has also increased. Our staff size and capacity have remained the same. With continual city growth, our obligation to our partnership will outgrow the available FTE's for E&O (which is 1).

- Lacey is growing faster than areas nearby.
  - Lacey now more populated than Olympia
  - City of Tumwater set to start growing; not as same rates at Lacey, but faster than Olympia
- % population from county determines how much is paid into partnership
  - Some costs are shared (joint cost), individual budgets included too
    - Described in the workplan

13. What are your target audiences and subject areas for education and outreach?

(AB)

The following target audiences and subject areas include:

- General public: general impacts of stormwater, pollution prevention
- K-12 students: impacts of stormwater, LID principles, stewardship opportunities
- College students: stewardship opportunities
- Residential community members: general impacts of stormwater, LID BMPs, behavior change (litter and debris prevention, pet waste management, prevention of illicit discharges, yard care techniques)
- Businesses operating within the city: general impacts of stormwater, LID BMPs, source control BMPs

14. How effective is your website for education and outreach? Are updates needed?

(AB)

- The City's website provides information on all of our stormwater programs and resources for our community. Our annual report, stormwater design manual, SWMPP and other important documents are also available here. The overall city website is difficult to navigate, though, and staff time committed to implementing updates to it is very limited.
  - City website is managed by one person and third party helps for updates
    - Pages need approval and assistance of one person – very limited
    - Page/web traffic reporting has not been communicated – this is a big gap
    - This person is leaving the City in a few weeks

        - Oddly organized – reports are under Stormwater Utility section instead of Stormwater because they were imported from the old website; things are hard to find due to non-intuitive pathways
- For stormwater educational information, BMPs, and registration for upcoming events, we rely on our shared website at Streamteam.info. This site is currently being updated to reflect new research surrounding pollutants. This site is overall more visually appealing and has a dedicated contractor to implement site updates.
    - This website is independent from the City website
        - Contains stormwater education, sign up, and calendars for events
        - Extensive and gets lots of clicks
        - Monthly engagements report available
        - City website links to this page as well

15. How effective are your materials for education and outreach? Are updates needed? Are there any missing gaps that need to be filled?
    (AB) Unsure. The inspectors would be able to answer whether these materials are effective in specific situations. I find that at most large community events people do not want papers. How do we get people to interact with and engage with our education without relying heavily on printed materials? Ideas are warmly welcomed.

    - Having QR codes has been successful, especially for stormwater pages
        - Can see analytics for how many people scanned, but not if they clicked on any links on the page

16. What is your process for coordinating with other departments/jurisdictions (e.g., illicit discharge detection and elimination [IDDE], source control, private facility inspections) to develop and update education and outreach materials?
    (AB)
    - With our REEP partnership, updates to existing materials or the creation of new ones occur on an as-needed basis. For specific audience needs, this will happen in-house. Communication with our operations and maintenance staff at our monthly stormwater group meetings often prompts the need for new outreach materials.
    - In just under 18 months, I have created three new outreach materials to address gaps in resources. These included a card for spill response in the city, a door hanger for leaves and street tree maintenance, and a residential pollution prevention flyer (to address illicit discharges and general stormwater education).
    - There is no streamlined process for requesting or responding to these requests, however, and I feel that there is great need for one.

- Sometimes we receive a lot more work or costs than we were ready for or expecting
- Business outreach includes researching and developing PCB literature and BPMs
- Streamteam resource library has a lot of information but may be overwhelming – plan to revise this

17. How successful is your behavior change campaign? How did reporting the findings go?
    (AB)
    - The previous behavior change campaign ended at the time of hiring a new Water Resources Specialist (end of last permit, winter 2023-24). No data was available from the implementation of that campaign. Fortunately, the previous campaign tied neatly into the source control program and is now included in that program.
    - For our current permit we are adopting a new behavior and target audience. Beginning this spring (~May 2025) the City will join the Adopt-a-Drain campaign to reach residents with litter and debris prevention. This effort will be in collaboration with a series of other Puget Sound municipalities who successfully launched this campaign during the last permit cycle.

    - Natural yard care campaign

Public Involvement and Participation

18. What are the established stakeholder groups that the City consults with regarding stormwater/surface water?
    (RY) WRIA 11 & 13, Tribes, will be reaching out to overburdened communities when we get those mapped out

    Economic Development Council of Thurston County are taking UGA and Lacey information to develop polygons to integrate into City mapping of where this audience is located to get targeted mailing out to them by the end of February.

19. How does the City solicit input and process comments on changes to the stormwater management program?
    - City comp plan public review meeting on Feb 12 for update
    - SCP requires public feedback
        - Short survey with problem identification

a. How much public input does the City typically receive on Stormwater Management Program (SWMP) Plan updates?

(RY) None

b. How can this process be improved?

(RY) Yes, I think we could be better at this. Right now the only time public involvement is happening is when we update our storm comp plan. I think we could hold a yearly open house for our SWMP Plan, SMAP, & SMED where we talk about the programs and projects and get input from folks.

Stormwater Management for Existing Development (SMED)

20. Describe the proposed process for selecting projects to include in the SMED Program to meet the City's goal of 9.3 equivalent acres.
    - Rehab on Westminster Pond to put in additional treatment
    - Woodland Creek regional facility filters
    - Street sweeper

a. Who should be included on the team?

Operations, street and storm group

b. How frequently should the team meet?

TBD

c. What level of public involvement should be considered?

[Not discussed]

d. Are there any barriers to including any of the following types of projects that may be included in the SMED Program?

Project Types	**Barrier Identified? (Yes/No)**
New flow control facilities	[Not discussed]
New runoff treatment (or treatment and flow control) facilities	

Project Types	Barrier Identified? (Yes/No)
New low impact development (LID) best management practices (BMPs)	
Retrofit of existing treatment and/or flow control facilities	
Maintenance with capital construction costs ≥ $25,000	
Property acquisition for water quality and/or flow control benefits (not associated with future facilities)	
Restoration of riparian buffers	
Restoration of forest cover	
Floodplain reconnection projects (on water bodies that are not flow control exempt)	
Permanent removal of impervious surfaces	
Street sweeping (above and beyond S5.C.9 requirements)	
Storm drain line cleaning	

e. What is the process for addressing barriers if they are identified?

- Land acquisition in already developed areas
- Funding barrier
- Street sweepers cannot be purchased until 7% zero emission vehicles statewide requirement has been met
  - The sweepers are diesel
  - Will raise to 10%
- Staffing limited for maintaining bioretention facilities
  - Ecology prefers these because of 6PPDQ
  - Space efficient but maintenance is challenging

Updates for Lacey Life:

- Monthly reminders on calendar
- Not the best relationship with them – not clear on what kind of content is expected from them (some materials have been rejected to be put in utility bills)

Source Control Program for Existing Development

21. **Source Control Inventory**
    a. How often do you update your source control inventory?

(RY) We are working on updating the inventory, but right now it is not a defined process. We get new/renewed licenses from finance every month. As we add them into the software, we check to see if we already have them.

(BC) We are constantly updating our inventory. As we uncover businesses no longer operating and get monthly reports of new businesses registered in Lacey.

- Big time commitment – additional staffing support
- NPDES Pro has been very helpful
- Have to figure out if new businesses are updated
- ~4000 businesses
- Ecology source control has gaps - a lot of home-based/mobile (non-storefront) businesses are pollution generating so Lacey reaches out to all business even though not required by Ecology
    - Still meeting target even with larger pool

b. How can the inventory update process be improved?

(RY) This is really hard to do. Businesses are constantly moving, opening, and closing. Any ideas would be greatly appreciated.

(BC) I am unsure, other than it is a massive time investment on me. If there were additional personnel it would be ideal. But, with the integration of NPDES Pro, it has saved me a lot of time.

22. **Source Control Inventory Prioritization:** Describe your source control inventory prioritization and inspection process.
    a. How are sites selected and prioritized?

    (BC) I have the businesses organized according to their NAICS code and I just randomly select a code and move my way down the list. I do this so I am not looking at the same businesses repeatedly. It keeps me moving all over the city, which is nice.

    (RY) Randomly picked.

    Try to use time efficiently: big inspections with little inspections in between

    b. What challenges do you face in conducting source control inspections?

    (RY) It's too new of a program so a few businesses are mad about us wanting to talk to them and few businesses are afraid that we are setting them up for immigration.

    (BC) Due to the fact Source Control is relatively new, and a lot of businesses have been in Lacey for a very long time. That makes it so I have to repeat myself early and often and convince that this is indeed new, important, and will be continuing in the future.
    - Recurring problem, taking time to build trust
    - Trying to schedule inspections in advance and resending introduction letters

    c. What actions need to be performed to better implement the source control inspection program?

    (RY) None, I think we are doing a great job and the Washington Stormwater Center is sending people to us to ask questions.

    - Going to get brochures with the chamber of commerce and Thurston County economic development council
    - Education at the state level

    (BC) Making new businesses that are registering with Lacey aware that they will get correspondence from me and need to schedule a meeting at some point.

23. **Source Control Inspection Coordination:** Do you coordinate with other departments/agencies (e.g., Ecology) on source control inspections?

    (RY)

- Mostly other inspectors in the stormwater section. We have tried to get code enforcement involved, but he says he doesn't enforce those codes. We have tried to get plan sets from the building department, but they were less than helpful. Luckily Carlos was willing to help. We also recent told them about a building full of black mold and stairs that are about to fall down.
- We also work with Thurston County Health, LOTT, Thurston County PPA, and any other agencies that we may need to.

    (BC) Yes, I have coordinated with Ecology's ISGP, PPA, and Hazardous Waste people. Dept Agriculture. Thurston County's PPA and Source Control Program. LOTT Cleanwater Alliance. Tumwater's Source Control Program. Olympia's Source Control Program. City of Tacoma's Source Control Program. I enjoy collaboration.

    SWIG meeting (regional): County, Tumwater, and Olympia inspection group

24. **Source Control Public Outreach:** Describe the City's public outreach program related to source control including audiences, topics, languages, and type of materials.

    a. Are there any gaps in audiences (e.g., multi-family, business owners, etc.)?

    (RY) We mailed an introductory letter to all entire inventory in June & July. We have a website for folks to look at with the BMPs for all businesses. We are approaching the first round of inspections as an education outreach.

    b. Are there any gaps in topics addressed (e.g., proper disposal methods, hazardous material storage & handling, recycling events, prevention communication)?

    BMP part of the manual has a lot of information, but Brian breaks down specifically how it applies to them

    c. Are there any gaps in languages?

    (RY) Spanish, Korean, Vietnamese

(BC) There are always language barriers that occur, but thus far it has not been an issue.

Translation app/ service used by Brian

d. How are materials currently distributed (e.g., electronically, hard copies)?

(RY) Hard copies

(BC) I provide both digital and hard copies of BMPs and correspondence, but the reports I write are all digital unless they ask for a hardcopy.

Digital reports

25. **Source Control Enforcement:** Describe the City's enforcement structure for corrective actions required following a source control inspection.

a. How frequently is enforcement implemented for source control corrective actions?

(RY) So far we haven't went to enforcement actions. But it is the same process throughout the city. Education and outreach, NOV, Correct Action Agreement and then fines. Fines are $100 per day up to $500 per day. I think the fines could be more strict to get people to actually do stuff.

(BC) Never, we can usually come to an agreement before we have to resort to talks of enforcement.

- Would require code enforcement officer
  - Given notice of violation (30 days), if still not addressed, then code enforcers will be involved
    - Has not been done
    - Code enforcer scope is extremely limited, they may not enforce Public Works
- Attorneys might not enforce the fines – need better enforcement

b. Do you have an enforcement SOP specific to source control?

(RY) LMC 14.40

(BC) Yes, if an issue is not addressed within reasonable time, then we can issue a notice of violation. If it is still not addressed as the notice expires, then we can move forward with penalties or fines.

26. **Source Control Training:** Describe the City's source control training program.

    a. What is the frequency of training?

    (RY) CWT PSCIC (Professional Source Control Inspector Certification), a shadowing with Tacoma, and then a few weeks of training with me.

    (BC) Every Employee receives training upon hire, and then again as necessary.

    b. Where is training documented?

    (RY) Each inspector has their training and then they send emails to me for approval before going to the business. No official documentation.

    (BC) With out Permit Coordinator

    c. How can the training process be improved?

    (RY) I don't think it needs to.

    (BC) I am not sure it can, it is a very detailed powerpoint, conversation, followed by a quiz. Also, we provide great contact information should there ever be an incident.

    Increase support for source control

Wrap-up

27. Is there anything else that you do related to surface water or stormwater that we did not ask about?

    Urban canopy assessment is done by Brian with Stormwater Utility funding

City of Lacey
Stormwater Management Comprehensive Plan
Stormwater Operations and Maintenance (O&M)
Workshop #3 Notes

Workshop #3 Focus: Workshop #3 focused on the following Phase II Permit topics:

- MS4 Mapping and Documentation
- Illicit Discharge Detection and Elimination (IDDE)
- Operations and Maintenance (O&M)
- Stormwater Asset Management
- Equipment and Facility Needs

Color Key
Written responses were submitted in advance of the workshop by the following:
RY = Royce Young
BR = Brandon Rogers
JF = Jack Froschauer

General notes from the 1/30/25 workshop are included in blue

Attendees at the 1/30/25 workshop included:

Doug Christenson (City of Lacey)
Royce Young (City of Lacey)
Brandon Rogers (City of Lacey)
Jack Froschauer (City of Lacey)
Rebecca Dugopolski (Herrera)
Citlali Ramirez (Herrera)

Overall

28. What are the City's top issues with surface water and stormwater management?

(BR) Public opinion. Its importance is often overlooked in areas ranging from city project priority, inspection detail, compliance efforts, and public engagement.

- Keeping up and working with Royce to get things added to the new GIS system
- Staffing shortage: no approval from council to hire additional roles

29. What are the City's priorities for water quality and resource protection (what resources or waterbodies)?

    (BR) I honestly don't know.

30. What elements of the current stormwater O&M program/approach work well?

    (BR) I think the street sweeping and catch basin maintenance programs work very well. We have seen better compliance with HOA facilities in recent years too.

    Sweeping program and catch basin cleaning are going well

31. What elements of the current stormwater O&M program/approach do not work well and what changes are needed?

    (RY) Lack of inspection that were done for private infrastructure when they didn't have an HOA. Now these facilities are over grown, in need of major maintenance, and the homeowners are arguing that it is not their responsibility.
    Too many facilities for one commercial inspector to do. We are going to hire another FTE, but until we do, we are out of compliance with our permit.

    (BR) I think a big barrier has been paper driven processes. This should be significantly changing with the adoption of NPDESpro.

32. Are there any major roadblocks to execution of any current or upcoming stormwater O&M program components?

    (RY) Tree canopy mapping. We are trying to get a grant, but we may need to get funds somehow.

    (BR) The lack of a concrete enforcement structure for non-compliant facilities.

Staffing and Resources

33. Approximately how much staff time (FTEs) are allocated to the stormwater O&M program? Is any of this work contracted out? If so, how much of this work is contracted out?

Permit/SWMP component	Staff time	Contractor time
MS4 Mapping and Documentation	450 hours	
Illicit Discharge Detection and Elimination (IDDE)	399 hours (callout, not documentation)	
Operations and Maintenance (O&M)	6390.25 hours	
Stormwater Asset Management	707.75 hours	
Private Stormwater Facility Inspector	2 FTE (1 FTE – commercial 1 FTE – HOAs)	
Other:		

MS4 Mapping and Documentation

34. Does the City stormwater system map have any significant information gaps or inaccuracies (e.g., size and materials of known outfalls)?

    (RY) Yes, I just spent over a month correcting ownership of facilities. I'm now part of the Bluebeam review to help with that. Outfalls will be mapped in the next month or two.

    Older areas of town don't have as builts. As inspections are done, there is a step to get these into GIS but there are still many areas not in GIS
    - There is an opportunity for an intern to support this work.

35. Does the City have a Standard Operating Procedure (SOP) for mapping and/or mapping updates?

    (RY) Yes, once the development is down and punch list items have been fixed, Jake enters the utilities by georeferencing the plans and adding them in. This can cause them to be a little off in location. As far as a formal document. No, there isn't a set SOP.

    Plans go to Jake then get added to HDE

36. Are there any improvements needed to the City's mapping update process? Is updated mapping information passed along in a timely manner to integrate updates into GIS?

    (RY) I think if Jake could let me know when he finishes entering a set of plans, he could tell me. I can then go look at them to ensure ownership is correct.

37. Does the City have a defined schema for infrastructure data stored in GIS or other formats?

    (RY) Yes, you can see that in the GIS data. It really needs to overhauled though.

    - "Bioretention pond" added recently
    - Some language still missing, but list was created by Doug that can be used for reference and to make updates

38. Has the City identified any barriers to implementation of the following new mapping requirements?

    a. Map tree canopy to support stormwater management on City-owned or operated properties

       (RY) Yes, this is a hard one to implement. For most storm infrastructure, we don't want trees in, around, above or in front of. Street tree don't work because the leaves are gone during the rainy season. Most good trees are in parks.

       - There are a lot of Ash trees – want to cut them down and replace them for safety reasons
         - Ash Borer problem
         - Mapping basins is part of our scope
           - Can build off previous work

    b. Map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have City-owned or operated stormwater treatment or flow control BMPs/facilities.

       (RY) We just want to map our basins regardless of size of pipe.

c. Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on City-owned or operated properties.

(RY) The Economic Development Council is in the process of helping us get these neighborhoods for the city of Lacey. Once I have a map of them, I will draw them into our geodatabase. This will make it easier for reference when mapping the other components of this mapping requirement.

Illicit Discharge Detection and Elimination

39. **Illicit Discharge Field Screening:** Describe the City's field screening process.

a. Which field screening methodologies do you use (e.g., catch basin/ manhole inspections, outfall inspections)?

(RY) Those listed in the 2020 IDDE Guide. We would check outfalls during the dry period and investigate and flow coming from the outfalls. It would be nice to get first flush, but that is going to be a work in progress.

- Catch basins are inspected if there is flow coming out of them during dry periods, but they aren't inspected otherwise
  - There are booklets that identify routes and catch basins
    - If there are issues, the corresponding page(s) are tabbed to have maintenance conducted on them
  - Catch basins are cleaned regularly

b. How is field screening documented? What would make this documentation easier?

(RY) We now have NPDES Pro to keep records. I'm not sure there are any records for previous inspections

c. Are you on track to complete field screening for an average of 12% of the MS4 each year? How is the 12% calculated? What would make it easier to meet this requirement?

(RY) Yes, we will be inspecting all outfalls every year moving forward.

40. **IDDE Training:** Describe the City's IDDE training program.

    a. Which staff/departments participate in IDDE training and identification?

    (RY) Anyone who works outside for any part of their job. I need to get CED, police, meter readers and Parks & Rec.

    - Police are trained (will be redoing the training for them soon)
    - Planners and inspectors and Parks and Rec staff currently receive training
    - Meter readers will receive training in the future
    - HR emails Royce when there is a new hire who will be working outside

    b. What is the frequency of training?

    (RY) At least once every 5 years or if there is a change in procedures or ordinance.

    c. Where is training documented?

    (RY) I have the training documented in a spreadsheet. I also create a certificate.

    d. How can the training process be improved?

    (RY) It would be nice to have it once a month that folks can just attend when they are hired.

41. **Illicit Connection/Discharge Public Outreach:** Describe the City's public outreach program related to illicit connections and illicit discharges including audiences, topics, languages, and types of materials.

    a. Are there any gaps in audiences (e.g., residents, business owners, etc.)?

    (RY) Yes, but we are currently getting ready to start water resources workshops to hit different target audiences.

    Public calls for car accidents (where liquids hit the ground) are responded to (high volume of calls).

b. Are there any gaps in topics addressed (e.g., spill prevention, reporting spills, proper disposal methods for hazardous materials)?

(RY) I'm trying to get everyone on the same page as far as reporting goes, but it is really hard to get folks to change.

c. Are there any gaps in languages?

(RY) There are always gaps in languages. Spanish, Vietnamese, Korean

d. How are materials currently distributed (e.g., electronically, hard copies)?

[Not discussed]

42. **Illicit Discharge Spill Hotline:** Describe the City's spill hotline and web form for reporting spills and illicit discharges.

a. Does the public generally know which number to call?

(RY) Yes, I think so.

(BR) Hard to gauge this metric. I would say no, but this is getting significantly better due to the source control program.

b. How do you hear about spills and illicit discharges other than the spill hotline or web form?

(RY) They call PW or they fill out the online form on the website. We also have it on our city webpage.

(BR) ERTS, other city staff, local jurisdictions, news reports.

Magnets, report-a-spill on Lacey Works, information on City website.

c. Are there any improvements that are needed for the web form?

(BR) I believe we recently revamped it.

d. Is there an SOP for the spill hotline?

(RY) I believe there are procedures in place. I'm unsure if there is a written document.

(BR) Not that I know of.

There is a list of questions on Lacey Works (type of spill, location, etc.) – whenever there is a spill, they contact the City

e. Are there any gaps in illicit discharge response that need to be addressed?

(RY) Nope. O&M responds to public property and Water Resources responds to private property.

(BR) The only one I can think of is being worked on right now. And that is to address clean up response and duties after a fire.

In the process of getting fire related spill system online

43. **Illicit Discharge Enforcement:** Describe the City's enforcement structure for illicit connections and illicit discharges.

a. How frequently is enforcement implemented for illicit connections and illicit discharges?

(RY) We really try to do education first. We give them a few chance[s] before we go to enforcement. Enforcement procedures really needs to be updated.

(BR) I want to say every time there is a discharge or illicit connection, we are enforcing the clean up and remediation. But legal enforcement actions are rare.

No legal action in place

b. Is there an enforcement SOP?

(RY) Not really
(BR) Not that I am aware of.

44. **Illicit Discharge Source Tracing:** Describe the City's illicit connection and illicit discharge source tracing process.

    a. Which source tracing methodologies do you use (e.g., visual inspections, opening manholes, using mobile cameras, collecting and analyzing water samples, etc.)?

    (RY) We use those out of the IDDE Manual.

    (BR) Visual inspections, checking catch basins and manholes, taking water samples, taking pictures.

    IDDE questions are the ones that are on Ecology's web portal; makes annual report easier

    b. How is source tracing documented? What would make documentation easier?

    (RY) I'm not sure we have a process for this. I'm hoping NPDES Pro

    (BR) Typically, through photos and emails. This could be improved upon with NPDES Pro.

45. Do you have any issues meeting the IDDE timelines specified in the NPDES permit? What would make it easier to meet these timelines?

    - Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment (G3)

    (BR) I believe we do this.

    - Investigate (or refer to the appropriate agency with authority to act) within 7 days, on average, any complaints, reports, or monitoring information that indicates a potential illicit discharge

    (BR) No issue here.

- Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection

  (BR) Good here.

- Upon confirmation of an illicit connection, use enforcement authority in a documented effort to eliminate the illicit discharge within 6 months. All known illicit connections to the MS4 shall be eliminated.

  (BR) I believe we meet this 90% of the time. There is an ongoing issue which I have concerns about, but we have not hit the 6-month mark yet.

  This refers to cleanup

- Notify Ecology within 30 days of becoming aware that a discharge from the Permittee's MS4 caused or contributed to a known or likely violation of water quality standards in the receiving water? (S4.F.1)

  (BR) No issue here.

City Operations & Maintenance

46. **Stormwater Facility Maintenance Standards:** Are there any issues implementing the maintenance standards from the 2022 Lacey Stormwater Design Manual?

    Not yet, working on getting pond maintenance put into a capital project due to their size

47. **Stormwater Facility Inspections Frequencies:**
    a. How frequently are City-owned stormwater facilities inspected?

       - CB within two-year period
       - Yearly on high volume streets
       - Pond maintenance done multiple times during the summer and some throughout the rest of the year
       - Take on seasonal work during the summer to help

- Filters and oil water separators inspected at least once a year

b. Who performs the inspections?

[Not discussed]

c. Do you use a reduced inspection frequency for any stormwater facilities?

[Not discussed]

d. Do you have the maintenance records to support reduced inspection frequencies?

[Not discussed]

48. **Stormwater Facility Inspection Program Goal:**

a. Are you achieving at least 95% of your stormwater facility inspections each year? If no, what would make it easier to meet this requirement?

[Not discussed]

b. Does the City have a maintenance checklist or field inspection form for your stormwater facility inspections?

[Not discussed]

c. Do you have separate checklists for different types of stormwater facilities?

- Notes are taken on HDE work orders
  - Open field
- Filters and media are on different replacement schedules – have to look in the catalogs
  - Need difference between each vendor
  - Cannot access the date when it was last replaced while in the field

49. **Stormwater Facility Maintenance Frequencies:**
    a. How frequently are City-owned stormwater facilities maintained?

       [Not discussed]

    b. Have any maintenance time frame exceedances occurred that were beyond your control? What were the reasons for these exceedances?

       [Not discussed]

50. **Stormwater Facility Mapping:**
    a. When was the last time your stormwater facility inventory was updated?

       (RY) This is an ongoing process that is continuously being updated.

    b. How often is your stormwater facility inventory updated?

       [Not discussed]

    c. What is your process for updating your stormwater facility inventory?

       There are frequent discrepancies between inventory resources

    d. Does the City operate or discharge to any shared regional stormwater facilities?

       [Not discussed]

    e. Are there any gaps related to stormwater facility mapping that are impacting O&M? If yes, please provide a description of what updates are needed. Do you have a plan in place for addressing these gaps?

       [Not discussed]

51. **Stormwater Facility Spot Checks:**
    a. Does the City maintain a list of maintenance problem locations (e.g., locations that O&M staff check on during and/or following major storms – aka "spot check list")?

        - Not a written list, but employees understand past problems that they check for
        - A list would be helpful especially for newer staff

    b. Where is this list saved?

        N/A – not a written list

    c. How often is this list updated?

        [Not discussed]

    d. How often do O&M staff perform spot-checks?

        [Not discussed]

52. **Stormwater Pollution Prevention Plans (SWPPPs):**
    a. Which City facilities have a SWPPP?

        (RY) Pit, Shop, Rainier Vista Park, RAC, Water Wells sites with chemical storage, odor control facilities

        - One overarching document; in the process of being updated,
        - Odor control facilities still need inspections

    b. Have any revisions been made to the SWPPP(s) since they were developed?

        (RY) Yes, I updated it two years ago and I'm in the process of updating it now.

    c. If yes, what year were they last updated?

        (RY) Being updated right now.

d. How frequently do SWPPP inspections occur?

(RY) Yearly, they are happening today (1/28) and they are checking to make sure the BMPs are still correct or if new ones need to be added

e. How frequently does SWPPP training occur?

(RY) Unsure

- WW facilities all have building sumps
- No regularly scheduled SWPPP training
- Yearly training could be feasible during larger meetings

53. **Standard Operating Procedures (SOPs):**

a. How is the implementation of the City's practices, policies, and procedures going?

(RY) Not sure. They do need to be updated for the new PCBs and building wash down. We could go through them to make sure we captured everything we are supposed to have and may be update the format.

b. Do you have SOPs compiled into a single document or is each SOP separate?

(RY) Yes, it is something I put together two years ago.

c. Do any SOP updates need to be made?

(RY) See answer above.

d. One new requirement in the 2024-2029 Phase II Permit is to address source control BMPs for polychlorinated biphenyls (PCBs) in building exterior cleaning and in City-owned buildings that are being renovated or demolished. Does the City currently have a process for addressing PCBs in building washdown and during renovation/demolition?

(RY) I will be reaching out to facilities to discuss this in the near future.

54. **Catch Basin Maintenance Standards:** Are there any issues implementing the maintenance standards from the 2022 Lacey Stormwater Design Manual?

    [Not discussed]

55. **Catch Basin Inspection Frequencies:**
    a. How frequently are City-owned catch basins inspected?

       [Not discussed]

    b. Do you use a reduced inspection frequency for any catch basins? Do you have the maintenance records to support this reduced frequency?

       [Not discussed]

56. **Catch Basin Maintenance Frequencies:**
    a. How frequently are City-owned catch basins maintained?

       [Not discussed]

    b. Have any maintenance time frame exceedances occurred that were beyond your control? What were the reasons for these exceedances?

       - Additional staffing (maintenance crews) would be helpful
       - Sometimes can't operate specific equipment because additional staff are needed
       - Route issues identified

57. **Catch Basin Mapping:**
    a. When was the last time your catch basin inventory was updated?

       [Not discussed]

    b. How often is your catch basin inventory updated?

       [Not discussed]

c. What is your process for updating your catch basin inventory?

[Not discussed]

d. Are there any gaps related to catch basin mapping that are impacting O&M? If yes, please provide a description of what updates are needed. Do you have a plan in place for addressing these gaps?

[Not discussed]

58. **Ditch and Culvert Inspection and Maintenance:** What is the City's current ditch and culvert inspection schedule/program? Fill in the table below with inspection and maintenance information.

Type of stormwater structure	Maintenance standards available? *Provide name of document	Maintenance checklist/form available?	Inspection frequency	Maintenance frequency
Ditches	[not discussed]			
Culverts				

59. **Ditch and Culvert Mapping:**
    a. When was the last time your ditch and culvert inventory was updated?

- No current inventory – last update was ~10 years ago
- Some of the larger ones for beavers or close to lakes are the ones prioritized for care
- Mowing done but no maintenance/sediment removal

    b. How often is your ditch and culvert inventory updated?

[Not discussed]

    c. What is your process for updating your ditch and culvert inventory?

[Not discussed]

d. Are there any gaps related to ditch and culvert mapping that are impacting O&M? If yes, please provide a description of what updates are needed. Do you have a plan in place for addressing these gaps?

   [Not discussed]

60. **Municipal Street Sweeping Program:**
    a. Have any issues been identified with implementing the following street sweeping program elements included in the 2024-2029 Phase II Permit?

       (RY) Sweeping priority areas at least once between July and September and at least two additional times per year (starting in 2028; only one sweeping event is required in 2027, between July and December)?

       - Two sweepers daily - ahead of state requirement
       - Working with the state to identify opportunities for dewatering
       - Currently dewater as they go during rain events
       - Ecology recently added some language to the Phase II Permit (Appendix 6) to allow this

    b. Estimating the amount of street waste solids removed for each sweeping event (wet or dry weight)?

       2,830.5 yards of debris

    c. Measuring the total curb miles of priority areas and curb miles swept?

       - 6,071.28 miles of priority areas
       - Priority areas are already identified
       - 80/20 on priority streets
       - Total: 7,588.2 miles

Private Construction Stormwater Site Inspection

61. Are there any issues implementing the maintenance standards from the 2022 Lacey Stormwater Design Manual?

    (BR) In general, no. The standards for maintenance are fairly clear.

    (JF) No

    - Parcel numbers not syncing on the back end
    - NPDESPro and GIS are not synced due to current license
    - Missing or incorrect parcel number also contributing to this problem

62. How frequently are privately-owned stormwater facilities inspected?

    (BR) They should be inspected annually, however this did not happen last year.

    (JF) Once a year.

63. Are you achieving at least 80% of your stormwater facility inspections each year? If no, what would make it easier to meet this requirement?

    (BR) For 2024, no. I firmly believe the NPDES Pro software will help with this. The rest is on me to hold myself accountable.

    (JF) Yes

64. Does the City have a maintenance checklist or field inspection form for your stormwater facility inspections?

    (BR) I believe we do have BMP checklists in a stormwater maintenance manual. I primarily use the plan set to identify all the stormwater structures at each site and go from there. The new software does it very similarly, just more automated.

    (JF) Yes. Bu[t] probably could improve some.

    - Yearly inspection forms also have checklists
    - In process of integrating into NPDESPro

65. Do you have separate checklists for different types of stormwater facilities?

    (BR) Yes, each BMP or structure has different things to look for.

    (JF) Yes

66. When was the last time your stormwater facility inventory was updated?

    (BR) In late 2024.

    (JF) It happens as new facilities are located.

67. How often is your stormwater facility inventory updated?

    (BR) About each time the city annexes new areas.

    (JF) Try to update it as needed. When new parcels [are found].

68. What is your process for updating your stormwater facility inventory?

    (BR) Identifying new parcels with stormwater infrastructure that fall within the annexed area and determining if its privately owned.

    (JF) Add new sites when found. Enter all the info and put them on inspection list.

    - In the works right now: when sign off occurs, communicating to inventory.
    - Need to bridge the gap with the older and newer facilities.

69. What type of tracking/recordkeeping is performed for inspections (e.g., hard copy inspection forms, electronic forms, notes)? What would make documentation easier?

    (BR) Currently a mixture, of photos, hard copies, emails, and letters. The new software should help tremendously on this front.

    (JF) Now have the NPDES Pro program. So should make everything easier and all info will be in 1 place.

    In flux as things are getting updated into NPDES Pro

70. Describe the City's private facility inspection training.

(BR) My training consisted of reviewing BMP maintenance guides, the Lacey Stormwater Design Manual, SWPPPs, Stormwater Comp Plan, historical inspection reports, and significant in the field training with experienced staff.

(JF) Most of my training is from my 26 years in stormwater.

- Good opportunities: free stormwater trainings, CESCL, MS4 inspector
- Have done presentations for private facility owners (external)
- Thurston County also has a training (HOA academy)

71. Describe the City's enforcement process when stormwater facilities are not being maintained properly.

(BR) I'm struggling to think of a way to put it. We don't really have clear guidance from management when it comes to significantly non-compliant stormwater facilities. We start with a regular letter of inspection, then a reminder letter, then a letter of non-compliance, then a Notice of Violation, but it's foggy after that.

(JF) Still in process of implementing a[n] enforcement process

- Defunct HOAs – notices of violation, fines? Unsure/gray area
  - Inspections this year
  - If they are noncompliant multiple times in a row, the consequences are still up in the air

72. Is there an inspection and/or enforcement SOP?

(BR) As far as I know, there is not a written SOP for this.

(JF) I don't think so.

73. Is there anything else about private inspections that we did not ask?

(BR) Not that I can think of.

(JF) No

Stormwater Asset Management

74. **Stormwater Asset Management:** Does the City have an active or inactive asset management program for its owned and or operated stormwater infrastructure? How is the program driven or managed (department or division)?

Program Elements	Currently in place (Yes/No)	Year planned or completed	Additional notes
Strategic Asset Management Plan	[not discussed]		
Asset Management Policy			
Asset Management Plans			
Road Map of Initiatives or list of Improvement Projects			
Maturity Assessment or Evaluation			
Position to support or position responsible for the asset management program activities?			

a. What types of assets or structures are regularly evaluated and at what frequency? Fill in the table below.

- Notes of needs are put on a priority list
- Not many catch basins in need of immediate repair – scheduled for when time and weather permit
- SCADA monitored pump station

Asset/Structure	Currently Evaluated? (Yes/No)	Frequency of Current Evaluation	Preferred Frequency for Future Evaluation
Catch basins	Yes	When structures are cleaned	
Aboveground stormwater facilities (e.g., bioretention, permeable pavement, rain gardens)			
Flow control structures			
Ponds			
In-stream structures (e.g., large woody debris, bank stabilization or flow control)			
Water quality facilities or filter cartridge facilities			

Asset/Structure	Currently Evaluated? (Yes/No)	Frequency of Current Evaluation	Preferred Frequency for Future Evaluation
Pump stations	Yes		
Underground stormwater facilities (e.g., vaults, tanks)			
Underground pipes			

b. What methods are used for evaluating asset condition and performance? How is the asset condition and performance data used?

[Not discussed]

75. **Infrastructure Rehab and Replacement**

a. How much of the rehab and replacement of infrastructure is planned versus unplanned?

Would like a CCTV truck for asset evaluation, but currently don't have the funding

b. How many emergency and reactive stormwater repairs occur annually?

[Not discussed]

c. What assets are most vulnerable and require rehab and replacement?

[Not discussed]

d. Do you have records of the repairs and replacement?

[Not discussed]

e. Who performs rehab and replacement? City crews or contractors?

Contractors implement larger rehab and replacement projects; City crews do CB and other smaller rehab and replacement projects

f. How is the list of rehab and repair assets developed? What data is used to inform the list of assets?

[Not discussed]

Equipment and Facility Needs

76. **Equipment:** What types of larger equipment/vehicles do City stormwater O&M crews currently own and operate? Fill in the table below.

Equipment	Current	Wish List
Vactor truck	1	May need additional truck (and crew) in the future
Street sweeper	2	Both need replacement (one this year, one next year)
CCTV truck	0 – can access shared camera truck if needed	Would be helpful to have this in the future specifically for stormwater (with a crew)
Other:		
Other:		

77. What additional equipment is needed?

- Small single axle vactor truck for narrow streets

Wrap-up

78. Is there anything else that you do related to surface water or stormwater that we did not ask about?

Nothing to add

Appendix D

Stormwater Management Program Levels of Service Matrix

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Appendix D

Date: March 13, 2026

To: Doug Christenson and Royce Young, City of Lacey

From: Julianne Chechanover, Herrera

Subject: Long-term Goals and Service Level Matrix

Long-term Goals

City staff developed long-term goals for each element of the Stormwater Management Program (SWMP). Program elements encompass all the functions performed or influenced by the SWMP. The long-term goals for each program element consist of the following:

Flood Reduction: There is no flooding of the public stormwater system from the 100-year storm.

2200 Sixth Avenue, Suite 1100 | Seattle, WA 98121 206.441.9080 herrerainc.com

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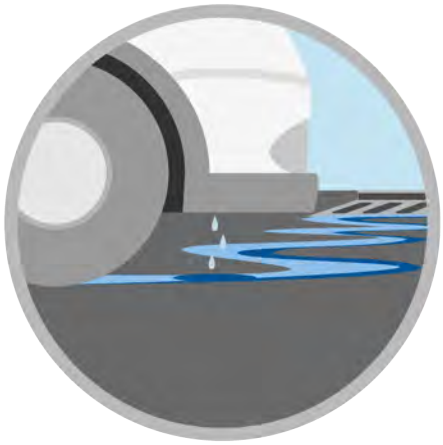
Surface Water Quality Improvement: All surface waterbodies in Lacey meet water quality criteria for designated recreation and fish uses.

Groundwater Protection and Recharge: Groundwater quality and quantity is not negatively affected by stormwater practices.

Habitat Improvement: Aquatic species thrive in and along surface waterbodies in Lacey.

Public Participation (Education, Outreach, and Involvement): City residents understand how their actions and choices affect stormwater, and they act in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.



Pollutant Source Control: Pollutants do not enter stormwater, groundwater, or surface waterbodies.

Infrastructure Operations and Maintenance: All stormwater infrastructure operates as intended.

Development Practices: Runoff from developed areas mimics forested hydrology and water quality. Equitable service is provided to applicants for development projects.

Stormwater Planning, Administration, and Funding: Revenue is wisely invested and produces measurable positive outcomes, including regulatory compliance. Utility rates are fair and equitable.

Table D-1. City of Lacey Stormwater Comprehensive Plan Service Level Matrix for the Stormwater Management Program.

Program Elements and Goals	Additional Activities and Projects Needed to Achieve the Given Level of Service	
	Required	**Recommended**
Flood Reduction: There is no flooding of the public stormwater system from the 100-year storm.	• Hawks Ridge Neighborhood Drywell Repair • Wedgewood Manor – Clearwater Court Flood Reduction • Glen Mary Drive Stormwater Improvements	• Belair-Impala Stormwater Installation • Clearbrook Drainage System • Lacey Street Stormwater Improvements • Pattison Lake Drive Conveyance Improvements
Surface Water Quality Improvement: All surface waterbodies in the city meet water quality criteria for designated recreation and fish uses.	• Shady Lane Treatment Facility Improvements • Ruddell & 32nd Facility Retrofit • Hawks Ridge Neighborhood Drywell Repair • Wedgewood Manor – Clearwater Court Flood Reduction • Woodland Creek at Martin Way Stormwater Improvements Study • Glen Mary Drive Stormwater Improvements	• Same as Required • 28th Court NE Pond Rehabilitation • Clearbrook Drainage System • Lacey Street Stormwater Improvements
Groundwater Protection and Recharge: Groundwater quality and quantity is not negatively affected by stormwater practices.	• Compliance with regulations • Hawks Ridge Neighborhood Drywell Repair • Wedgewood Manor – Clearwater Court Flood Reduction • Review the status of existing municipally owned UIC wells to ensure they are properly registered with Ecology's UIC Program. • Identify any additional UIC Class V wells that predate 2/3/2006 and complete well assessments, if necessary. • Conduct annual maintenance inspections of municipal UIC wells. • Perform maintenance activities on UIC wells when inspections identify an exceedance of maintenance standards. • Integrate areas served by municipal UIC wells into the Illicit Discharge Detection and Elimination (IDDE) Program as part of routine response activities. • Create a map of all municipal UIC wells to be used during IDDE spill response activities. • Continue to provide comments during the site plan review process prior to construction and inspections during construction to ensure compliance with the latest SDM. • Continue to remind private UIC well owners of the requirement to register all UIC wells with Ecology.	• Same as Required
Habitat Improvement: Aquatic species thrive in and along surface waterbodies in the city.	• Develop and adopt tree canopy goals and policies to support stormwater management by December 31, 2028.	• Same as Required

Table D-2 (continued). City of Lacey Stormwater Comprehensive Plan Service Level Matrix for the Stormwater Management Program.

Program Elements and Goals	Additional Activities and Projects Needed to Achieve the Given Level of Service	
	Required	**Recommended**
Public Participation (Education, Outreach, and Involvement): The public understands how their actions and choices affect stormwater and acts in ways that reduce stormwater flow rates and improve water quality and aquatic habitat.	• Compliance with regulations • Develop materials for one new target audience and one new subject area annually. • Implement new or modify existing education and outreach activities, continue to track activities and monitor success. • Evaluate the effectiveness of the City's ongoing behavior change campaign (expected to be required under S5.C.2.a.ii of the 2029-2034 Permit) prior to July 1, 2030. • Develop a behavior change evaluation report to submit with the 2029 Annual Report. • Evaluate the effectiveness of the behavior change campaign and adjust as needed. • Continue to provide opportunities for public input, including overburdened communities, on the City's stormwater website related to the SWMP Plan and SMAP. • Continue to post the updated SWMP Plan and Annual Report on the City's website. • Continue to host, promote, and advertise stewardship activities. • Continue collaboration with other jurisdictions to identify new priority audiences/BMPs and program evaluation techniques.	• Same as Required • Develop quarterly public stormwater and water resource protection workshops. • Continue collaboration with other jurisdictions to identify new priority audiences/ BMPs and program evaluation techniques. • Develop strategy and schedule and begin broadscale implementation of behavior change for selected priority audience(s) and behavior(s). • Tailor the Adopt-a-Drain program to be relevant to City residents and businesses. • Conduct public education and outreach on implementation of the updated Stormwater Design Manual. • Continue to coordinate with Parks on stewardship events. • Identify additional riparian areas in need of restoration (planting, invasive removal, erosion control) to expand stewardship opportunities (including at Greg Cuoio Park). • Continue to document methods used to identify overburdened communities. • Host a yearly open house to discuss the City's SWMP Plan, SMAP, and SMED program and projects. • Update the Stormwater and Stormwater Utility webpages on the City's website using user experience (UX) principles.

Pollutant Source Control: Pollutants do not enter stormwater, groundwater, or surface waterbodies.	• Compliance with regulations • Develop PCB educational and workshop materials. • Develop public education and outreach Standard Operating Procedures (SOPs) to assess both publicly-owned and privately-owned buildings for PCB-containing materials, and to educate contractors/building owners on the new requirements for pressure washing and demolition/renovation. • Continue to provide information regarding the City's pollution prevention and control resources, including methods for reporting spills, illicit discharges, and illicit connections. • Review and update the Lacey Municipal Code (LMC) to reflect the new requirements prohibiting washdown water from buildings containing PCB materials and post-emergency clean-up procedures. • Continue field screening for illicit connections and illicit discharges. • Continue to implement spill hotline and online reporting form. • Continue to implement staff training program. • Continue to implement the IDDE training for the Lacey Police Department. • Continue to work with the City's Street/Storm Maintenance Division and Community and Economic Development departments to develop post-emergency clean-up procedures. • Continue to work with Lacey Fire District 3 to develop procedures for clean-up. • Continue to respond to spills and water quality complaints. • Continue tracking the number of illicit discharges, illicit connections, and spills. • Continue to implement staff training program. • Continue to report illicit discharge data to Ecology. • Summarize annual activities for the IDDE component of the Annual Report, including updates to the SWMP Plan. • Continue to refine and improve escalating enforcement procedures, including roles and responsibilities. • Continue to update the source control inventory at least once every five years. • Continue to implement escalating enforcement if sites do not comply with source control program requirements. • Continue to provide information about the source control program to business owners and operators. • Continue to meet the 20% inspection target for the source control program on an annual basis. • Continue to respond to credible complaints. • Continue to implement escalating enforcement if sites do not comply with source control program requirements. • Continue to implement source control onboarding and refresher trainings. • Continue to allow staff to obtain the Professional Source Control Inspector Certification (PSCIC) if source control inspections are part of their job function. • Keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s). • No later than December 31, 2027, begin using existing data to conduct spatial analysis of nutrient loading from the MS4. • No later than August 1, 2028, develop and implement priority BMPs to minimize the transport of nutrients via the MS4. • Designate areas discharging via the MS4 to Budd Inlet as high priority areas for illicit discharge detection and elimination. Complete IDDE screening for nutrient sources in 100% of these areas by July 31, 2029, and implement the schedules and activities identified in S5.C.5 of the Western Washington Phase II Permit in response to any illicit discharges found. • Develop a sampling plan for untreated outfalls near Chambers Lake. • Update the Henderson TMDL Coordinated Sampling Plan in 2029 for the 2029-2034 Phase II Permit. • Annually implement best management practices in areas discharging to the Henderson Inlet via the MS4 in accordance with S5.C.2 of the Western Washington Phase II Municipal Stormwater Permit. • Continue to implement the Fecal Coliform Bacteria Wet Weather Sampling Program for the College Regional Stormwater Facility in accordance with the illicit discharge detection and elimination efforts and activities identified in S5.C.5 of the Western Washington Phase II Permit. • Continue to communicate with the City of Olympia to monitor and reduce fecal coliform bacteria discharges from the Fones/Taylor wetland treatment facilities. • Perform fecal coliform bacteria sampling at the stormwater pipe located on River Mile 3.7 (i.e., Tanglewilde pipe) of Woodland Creek. • Annually report on temperature reduction measures in the Deschutes River Watershed.	• Same as Required • Further develop and implement a stormwater outfall illicit discharge screening program. • Review and revise upstream illicit discharge source control programs to respond to illicit discharges found and/or reported. • Work with the City's Street/Storm Maintenance Division and Community and Economic Development departments to develop post-emergency clean-up procedures. • Develop an illicit discharge enforcement SOP. • Evaluate the need to revise monetary penalties for stormwater violations (e.g., construction, source control, private facility maintenance). • Continue to train staff on SwiftComply software. • Coordinate monitoring activities related to shared facilities (e.g. the Fones Road Stormwater Facilities) or for areas with multiple authorities (e.g. the Woodland Creek basin) with the City of Olympia and Thurston County on an annual basis.

Table D-3 (continued). City of Lacey Stormwater Comprehensive Plan Service Level Matrix for the Stormwater Management Program.

Program Elements and Goals	Additional Activities and Projects Needed to Achieve the Given Level of Service	
	Required	**Recommended**
Infrastructure Operations and Maintenance: All stormwater infrastructure operates as intended.	• Compliance with regulations • Ruddell & 32nd Facility Retrofit • Continue to maintain and update the City's MS4-related mapping data on an ongoing basis. • Map tree canopy to support stormwater management on City-owned or operated properties by December 31, 2026. • Implement a methodology to map and assess acreage of MS4 tributary basins to outfalls with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems that have stormwater treatment and flow control BMPs/facilities owned or operated by the City and submit it in the 2028 Annual Report. • Continue to update outfall mapping information as needed. • Map overburdened communities in relation to stormwater treatment and flow control BMPs/facilities, outfalls, discharge points, and tree canopy on City-owned or operated properties by December 31, 2026. • Continue to maintain electronic maps and corresponding data attributes. • Continue annual review of O&M Program and performing maintenance promptly (within the timelines specified in the Permit). • Update the Lacey SDM to adopt Ecology's updated maintenance standards. • Continue to implement a program to verify adequate long-term O&M of private stormwater treatment and flow control BMPs/facilities. • Continue to document inspections and escalating enforcement actions for private stormwater flow control and treatment BMPs/facilities. • Continue to annually inspect and maintain municipally owned or operated stormwater treatment and flow control BMPs/facilities according to Permit requirements. • Continue to implement spot checks and inspections after major storms. • Continue to inspect catch basins and maintain as needed. • Update practices, policies, and procedures to include Source Control BMPs for minimizing PCBs entering the MS4 from City-owned buildings exterior cleaning and maintenance and to prevent PCBs from entering the MS4 in preparation for and during demolition and renovation of City-owned buildings by December 31, 2027. • Compare the City's established street sweeping program to the 2024-2029 Permit requirements to determine where adjustments may be needed. • Compare the City's established street sweeping program to the 2029-2034 Permit requirements to determine where adjustments may be needed. • Continue with street sweeping throughout the city when develop priority areas. • Submit the street sweeping priority areas in the 2028 Annual Report. • Review and update as necessary, the City's existing sweeping program and procedures to ensure compliance with Permit obligations (i.e., priority area criteria, sweeping timing and frequency, and information tracking and reporting). • Continue to update and implement SWPPPs as needed. • Continue to conduct routine SWPPP inspections per the schedule outlined in the SWPPPs. • Verify that completed inspection forms are kept with the SWPPPs at each site. • Continue to implement staff training program. • Continue to document and maintain records of training for City staff. • Summarize O&M activities in Annual Report, including updates to the SWMP Plan.	• Same as Required • Stormwater Lift Station 01 Improvements (SW LS-01) • Continue to develop a defined schema for infrastructure data stored in GIS. • Hire an intern to support stormwater GIS updates in older areas of the city. • Evaluate using a drone to support ongoing mapping. • Continue to map the City's ditch network. • Apply for a Department of Natural Resources (DNR) grant to perform an additional tree canopy assessment. • Develop an SOP for mapping and mapping updates. • Review and update inspection, operation and maintenance processes and procedures for City owned or operated stormwater catch basins, flow control and treatment facilities. • Continue to coordinate with North Thurston Public Schools on inspections of schools within the city. • Continue to coordinate with Lacey Fire District 3 on inspections of fire stations within the city. • Develop a private facility stormwater inspection program for major maintenance projects. • Develop a checklist to help with spot checks. • Purchase a small, single axle vactor truck to perform catch basin cleanings on narrow streets. • Develop a catch basin grouting program. • Develop a ditch and culvert maintenance program. • Develop a stormwater conveyance condition assessment and rehabilitation/replacement program. • Develop a pond maintenance program. • Continue to train staff on Naviline software. • Rent a street sweeper to sweep on residential streets during the leaf season. • Evaluate retrofit opportunities for the City's decant facility, including options for material storage covers and solids drying.

Table D-4 (continued). City of Lacey Stormwater Comprehensive Plan Service Level Matrix for the Stormwater Management Program.

Program Elements and Goals	Additional Activities and Projects Needed to Achieve the Given Level of Service	
	Required	**Recommended**
Development Practices: Runoff from developed areas mimics forested hydrology and water quality. Provide equitable service to development project applicants.	• Compliance with regulations • Update the City's SDM to incorporate and adopt the required updates from Ecology's 2024 SWMMWW by June 30, 2027. • Update the City's SDM to incorporate and adopt the required updates from Ecology's 2029 SWMMWW by June 30, 2032 (expected to be required under S5.C.6.b of the 2029-2034 Permit). • Conduct staff training on implementation of the updated SDM (including implementation of the wet season SWPPP). • Continue to implement stormwater plan review. • Continue to implement preconstruction erosion and sediment control inspections. • Continue to refine and improve enforcement procedures to ensure proper installation and maintenance of erosion and sediment control BMPs. • Continue to inspect all stormwater treatment and flow control BMPs/facilities, and catch basins, in new residential developments at least twice per 12-month period. • Continue to inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. • Continue to support Ecology by providing the "Notice of Intent" (NOI) forms for Construction Activity and Industrial Activity. • Continue to implement staff training program. • Select a set of strategic stormwater investments identified in the SMAP, stormwater CIP, or opportunistic stormwater investments identified by leveraging projects outside of SMAP areas. • Identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's compliance target of 9.3 equivalent acres. • Continue to identify additional stormwater facility retrofit projects, restoration projects, or maintenance activities (e.g., street sweeping and line cleaning) that could be used to meet the City's future compliance target in the 2029-2034 Permit. • Develop a list of planned projects, update annually, and submit to Ecology with the Annual Report. • Fully fund, start construction, or completely implement project(s) that manage 9.3 equivalent acres. • Submit documentation of achieving the 9.3 equivalent acre target with the 2028 Annual Report. • Consider coordinating with Thurston County and the Cities of Olympia and Tumwater on stormwater investments to meet regional goals (the City can receive up to 25% of assigned acreage credit from collaborative projects if at least 0.5 equivalent acres are managed within the City). • Report the amount of estimated or projected equivalent acres managed by stormwater facility retrofits, restoration projects, and maintenance activities (e.g., street sweeping and line cleaning) to submit with the 2028 Annual Report. • Meet the Stormwater Management for Existing Development (SMED) requirements found in Section S5.C.7 and Appendix 12 of the 2024-2029 Phase II Permit.	• Same as Required • Revise information management systems to track and report construction, new development and redevelopment permits, inspection and enforcement actions and Private Drainage Inspection Program inspections and enforcement actions. • Develop standardized plan review, inspection, enforcement and compliance documentation and tracking processes and procedures. • Conduct WWHM, MGSFlood, MODFLOW, MODRET, and other software training for staff who perform modeling as one of their job duties.

Table D-5 (continued). City of Lacey Stormwater Comprehensive Plan Service Level Matrix for the Stormwater Management Program.

Program Elements and Goals	Additional Activities and Projects Needed to Achieve the Given Level of Service	
	Required	**Recommended**
Comprehensive Planning, Administration, and Funding: Revenue is wisely invested and produces measurable positive outcomes. Utility rates are fair and equitable.	• The Technical Advisory Group (TAG) should continue to meet periodically to discuss topics and provide recommendations to departments and programs with stormwater management program responsibilities. • Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2027 Annual Report. • Prepare a report summarizing coordination with long-range and comprehensive planning efforts to submit with the 2032 Annual Report (expected to be required under S5.C.1.b of the 2029-2034 Permit). • Continue to annually assess and document administrative or regulatory barriers to implementation of LID principles or LID BMPs. • Document considerations, reasoning, and rationale for tree canopy goals and policies to support stormwater management by December 31, 2028. • Add actions to the Woodland Creek SMAP by December March 31, 2027. • Develop a new SMAP or add actions to an existing SMAP by March 31, 2032 (expected to be required under S5.C.1.d of the 2029-2034 Permit). • Continue to make annual payment of $14,545 (by August 15th each year) to the collective fund for S8.A. • Continue to make annual payment of $21,527 (by August 15th each year) to the collective fund for S8.B. • Continue to provide information as requested for effectiveness and source identification studies that are under contract with Ecology as active Stormwater Action Monitoring (SAM) projects. • Continue to update the SWMP Plan, answer the Annual Report questions, and submit the Annual Report each year. • Continue retaining records for a minimum of five years after the expiration date of the Permit.	• Same as Required • Continue to coordinate with Planning staff on how stormwater management, protection and improvement of water quality, low impact development (LID), and tree canopy will impact long-range planning.

Appendix G

Financial Analysis

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FCS
a Bowman company

CITY OF LACEY

Stormwater Utility Rate Study

Submitted by:

FCS, a Bowman company
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P: 425.867.1802

Submitted to:

Royce Young
Stormwater Permit Coordinator – Water Resources
City of Lacey, WA
420 College Street SE
Lacey, WA 98503

July 2026

July 2026

Royce Young, Stormwater Permit Coordinator – Water Resources
City of Lacey, WA
420 College Street SE
Lacey, WA 98503

Re: City of Lacey Stormwater Utility Rate Study

Dear Ms. Young:

Attached is the **DRAFT REPORT** documenting the results of the City of Lacey's stormwater rate study. We want to thank you and other City staff for your assistance and participation in gathering information and various study discussions. It has been a pleasure to work with you and City staff on this study. Please let us know if you have any questions. Tage can be reached at (425) 615-6487 or Tage.Aaker@bowman.com.

Sincerely,

John Ghilarducci
FCS President/Principal

Tage Aaker
Senior Project Manager

Amanda Levine
Assistant Project Manager

Sachin Goradia
Project Consultant

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1.0 Introduction

Project Background

In 2024, the City of Lacey (City) contracted with Herrera Environmental Consultants Inc. (Herrera) to update the City's Stormwater Strategic Plan (SSP). As part of this effort, Herrera subcontracted with FCS, a Bowman company (FCS), to update the City's stormwater utility rate study, which was last completed in 2018.

As part of this updated rate study, FCS first reviewed key City policies and developed supporting policy papers addressing rate structure alternatives, rate credits, and snowbird rates for stormwater utility customers.

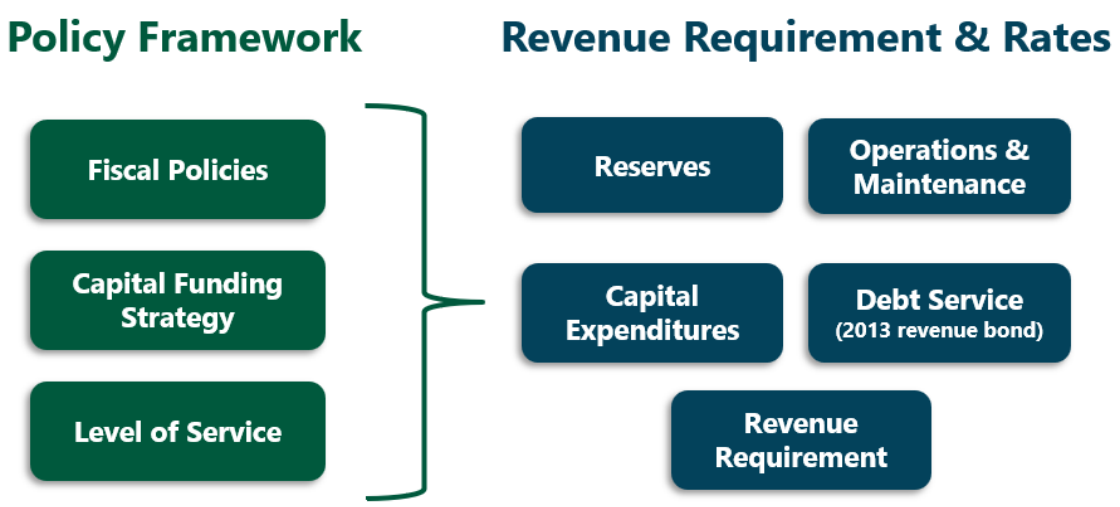
FCS also updated the stormwater utility's revenue requirement analysis. This included incorporating updated staffing and programmatic costs needed to support the Recommended level of service (LOS), as well as the City's updated ten-year capital improvement program (CIP). This report documents the study's objectives, assumptions, findings, and recommendations.

The City originally established its stormwater utility in 1985 to address the growing need to manage surface water. Today, as outlined in the City's SSP, the utility is responsible for maintaining a large system that includes approximately 7,140 catch basins and storm drains, 150 miles of pipe, 65 outfalls, and other stormwater assets. The utility is funded through monthly service charges collected from properties within City limits. These revenues support the planning, management, design, construction, maintenance, and replacement of the stormwater system.

Revenue Requirement Overview

The primary purpose of this rate study is to develop a funding plan ("revenue requirement") for the City's stormwater utility for the 2027–2035 planning horizon to align with the SSP. The revenue requirement defines the total funding needed to support the utility on a standalone basis, accounting for current operating obligations, additional programmatic and staffing needs identified through Herrera's Required and Recommended LOS analysis, and planned capital investments. Rate increases are applied across-the-board, with no changes to rate design included in this study. The overall approach is summarized in **Exhibit 1**.

Exhibit 1. Revenue Requirement Overview



Revenue Requirement Results

This report documents two revenue requirement scenarios:

- **Scenario 1** documents a rate strategy which implements the Recommended LOS and completes the utility's full CIP on schedule with grant funding assumed for select projects. To cover the new forecasted financial obligations of the stormwater utility, Scenario 1 requires annual rate increases of 9.50% through 2034.
- **Scenario 2** documents a rate strategy that covers the same expenses as in Scenario 1, but without any grant funding, and therefore requires annual rate increases of 11.00% through 2034.

Exhibit 2 shows the recommended across-the-board utility rate increases for the Recommended LOS with and without grant funding along with the monthly stormwater rate for a single-family residence. Sample bills for other types of customers are included in the Conclusion section of this report.

Exhibit 2. Across-The-Board Rate Increases (Minimum Charge Monthly Rate)

Level of Service	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario 1: Recommended Level of Service with Grants										
Annual Percent Change	4.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	2.00%
Monthly Single-Family Rate	$15.46	$16.92	$18.53	$20.29	$22.22	$24.33	$26.64	$29.17	$31.94	$32.58
Scenario 2: Recommended Level of Service without Grants										
Annual Percent Change	4.50%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	2.00%
Monthly Single-Family Rate	$15.46	$17.16	$19.04	$21.14	$23.46	$26.04	$28.91	$32.09	$35.62	$36.33

2.0 Fiscal Policies

The basic framework for evaluating utility revenue needs includes sound fiscal policies. Several policy topics are important to consider further as part of managing the finances of the stormwater utility, including operating reserves, capital reserves, debt service coverage, and rate funded capital.

Operating Reserve

An operating reserve is designed to provide a liquidity cushion; it protects the utility from the risk of short-term variation in the timing of revenue collection or payment of expenses. City *Resolution No. 992*, which documents City-adopted fiscal policies, states there needs to be at least two months' worth of operating revenue (excluding one-time revenues) in each utility's operating fund. Based on this adopted policy, the forecast targets an operating reserve for the stormwater utility of between two and three months' worth of annual rate revenues.

> ***Recommended Policy:*** *Achieve a year-end minimum balance target of 60 days (16%) of total annual operating revenues. This equates to approximately $1.0 million based on the 2026 forecasted annual rate revenue of $6,400,000.*

Capital Reserve

The capital reserve provides a source of emergency funding for unexpected asset failures or other unanticipated capital needs. It can also help the utility address cash flow issues related to capital projects. Given these different purposes, there are a variety of potential benchmarks for setting a minimum balance for this reserve. Some potential options include: a percentage (commonly 1 – 2%) of the original cost of total fixed assets; a rolling multi-year average of capital improvement program costs; or an amount sufficient to fund an equipment failure. This capital reserve policy is not intended to guard against catastrophic system failure or extreme acts of nature.

> ***Recommended Policy:*** *A minimum capital ending fund balance target of 2% of fixed assets (non-depreciated original cost of construction) is recommended. This equates to $1.5 million based on a fixed asset inventory totaling approximately $74.7 million as of the beginning of 2026. The reserve increases as the City executes the CIP, thereby adding fixed assets to the utility. Capital reserves larger than this may be prudent if the City is saving for future capital projects that cannot be funded with same-year rate revenues.*

Debt Service Coverage

Debt service coverage is typically a requirement associated with revenue bonds and some state loans, and it is an important benchmark to measure the riskiness of the utility's capital funding plans. Coverage is most easily understood as a factor applied to annual bonded debt service. If a utility sells revenue bonds, a coverage requirement of 1.20 means that the utility agrees to collect enough revenue to meet operating expenses and not only pay debt service but collect an additional 20% increment above bonded debt service.

The extra revenue is a financial cushion that makes bondholders more confident that debt service will be paid on time. The extra revenue can be used for capital expenditures, to build reserves for future asset replacement, or

for debt service on subordinate debt. Achieving a bonded debt service coverage level greater than the minimum required level is a positive signal that bond rating agencies notice, and it can result in more favorable terms if the utility needs to go to the market to sell bonds.

> ***Recommended Policy:*** *While 1.20 is the legal minimum coverage for the City's 2013 revenue bonds—the City's only stormwater utility related debt—FCS recommends a target coverage of at least 1.50 to 2.00. Throughout the forecast, a debt service coverage of 12.70 or greater is achieved.*

Rate Funded Capital

Rate funded capital is the funding of long-term infrastructure replacement needs through a regular (annual) and predictable rate provision. Most commonly, utilities that have addressed replacement funding needs have used historical (original cost) depreciation expense as the basis for a reasonable level of reinvestment in the system. This strategy can help minimize a utility's reliance on debt.

> ***Recommended Policy:*** *The City desires to fund its capital program without relying on debt and instead plans to rely on a mix of existing reserves and annual rate funded capital. Therefore, the utility should strive to generate revenues to cover operating costs, existing debt service, and the approximate annual average capital program. Any funding deficit between annual capital expenditures and annual rate funded capital must be covered by drawing down capital reserves.*

Exhibit 3 provides a summary of the recommended fiscal policies for the City.

Exhibit 3. Summary of Fiscal Policies

Policy	Stormwater
Operating Reserve (days of revenues)	60 days of operating revenues (16%)
Capital Reserve	A minimum of 2% of the original cost of fixed assets
Minimum Debt Service Coverage Ratio	If debt is issued, an internal policy target of at least 1.50-2.00x is prudent
Rate Funded Capital	Set rates to allow the utility to cash fund its capital program to be supplemented by existing capital reserves as available

3.0 Revenue Requirement Forecast

This section explains the key assumptions and inputs used to forecast the revenue requirement under each scenario. The analysis uses the City's 2026 budget, added costs to implement the recommended LOS, existing debt, the 10-year CIP, fiscal policy targets, and expected economic conditions to estimate the annual rate revenue needed through 2035.

General Forecast Assumptions

The following general assumptions are used in this rate forecast and applied to the City's 2026 budget and any additional programmatic and/or staffing additions associated with the recommended level of service:

- **General cost inflation** – assumed to be 3.00% per year based on both the Washington State Economic & Revenue Forecast Council projection for the Consumer Price Index (CPI) as well as the recent historical performance of the Seattle-Tacoma-Bellevue CPI.
- **Construction cost inflation** – assumed to be 3.00% per year based on the recent performance of the Engineering News Record's Construction Cost Index (20-City Average).
- **Taxes** – State Business and Occupation tax rate of 2.10%; City utility tax rate of 6.00%. Note that this 6.00% utility tax is applied as a markup on the utility bill above the stated rates.
- **Personnel Cost Inflation** – based on Employment Cost Indices from the U.S. Bureau of Labor Statistics, as well as discussion with City staff, and consideration of their budgeting process.
    - » Labor Cost Inflation: assumed to be 4.00% per year.
    - » Benefits Cost Inflation: assumed to be 5.00% per year.
- **Fund earnings rate** – assumed to be 3.50% in 2026, 3.00% in 2027, 2.50% in 2028, and 2.00% thereafter, based on the long-term average of the Washington State Local Government Investment Pool (LGIP).
- **Customer account growth** – based on the City's recent population growth history and discussions with City staff, growth is assumed to be 1.25% per year.
- **Realization Factor**. To consider the historical spending within the stormwater utility, all operating expenses are set to a 97% completion factor beginning in 2027.

Fund Balances

The stormwater utility's operating activity is tracked in Fund 403, its capital activity is tracked in Fund 412, and its debt activity tracked in Fund 452. The starting 2026 balance for each fund is shown in **Exhibit 6**. For the operating fund, Fund 403, any amount exceeding sixty days of revenue (the operating reserve target) is assumed to be available for capital projects.

Exhibit 4. Stormwater 2026 Utility Fund Balances

Fund	2026 Beginning Balance
Operating Fund - 403	$5,290,000
Capital Fund - 412	$12,150,000
Debt Fund - 452	$50,000
Combined 2026 Beginning Fund Balance	**$17,490,000**

Debt Obligations

The City has one existing debt obligation related to the stormwater utility: a 2013 Revenue Bond. The stormwater utility's share is 16.8% and the average principal plus interest payment is approximately $100,000 per year. The final payment for this loan will be made in 2033.

Levels of Service Operating Assumptions

This report documents two (2) scenarios for the City. Both scenarios incorporate the Recommended LOS developed by Herrera, which includes additional full-time equivalents (FTEs) and other programmatic costs. The Recommended LOS includes enhancements to the City's stormwater management program at approximately $75,000 per year (2026 $), plus a one-time cost ($750,000) to acquire a Vactor truck (2026 $). The Recommended LOS also includes about $700,000 per year in expanded maintenance activities (2026 $). Lastly, as shown in **Exhibit 4**, the Recommended LOS includes additional FTEs, which total roughly $1 million per year 2028-35 (salaries plus benefits, with assumed cost escalation).

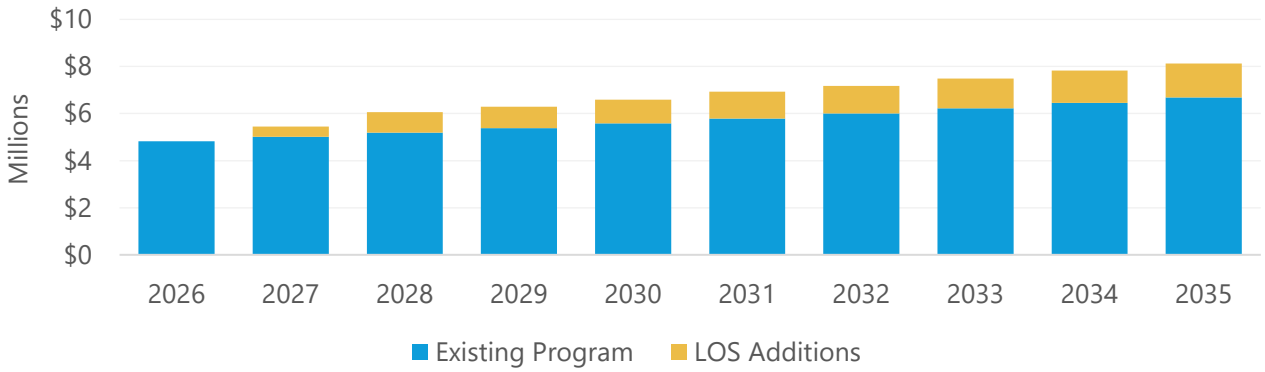
Exhibit 5. Total FTE's Per Year for the Recommended LOS

Stormwater Additional FTEs	2027	2028	2029	2030	2031	2032	2033	2034	2035
Project Administrator	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Civil Engineer II – Public Works	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Engineering Technician III	0.56	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Wet-Season Maintenance Technician	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Water Resources Specialist	0.28	0.79	0.73	0.74	0.74	0.71	0.69	0.63	0.63
Journey Level Maintenance Technician	0.00	1.00	1.25	1.25	1.25	1.25	1.25	1.25	1.25

Stormwater Additional FTEs	2027	2028	2029	2030	2031	2032	2033	2034	2035
Senior Maintenance Technician	0.00	1.06	1.07	1.36	1.31	1.31	1.31	1.31	1.31
GIS Intern	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Total FTEs	**2.84**	**5.90**	**6.36**	**6.41**	**6.36**	**6.32**	**6.30**	**6.24**	**6.24**

Exhibit 5 below shows the City's baseline budget over the forecast period (in blue), the costs of the LOS additions in yellow. The total bar represents the total operating expenses within the stormwater utility.

Exhibit 6. Operating Forecast 2026-2035



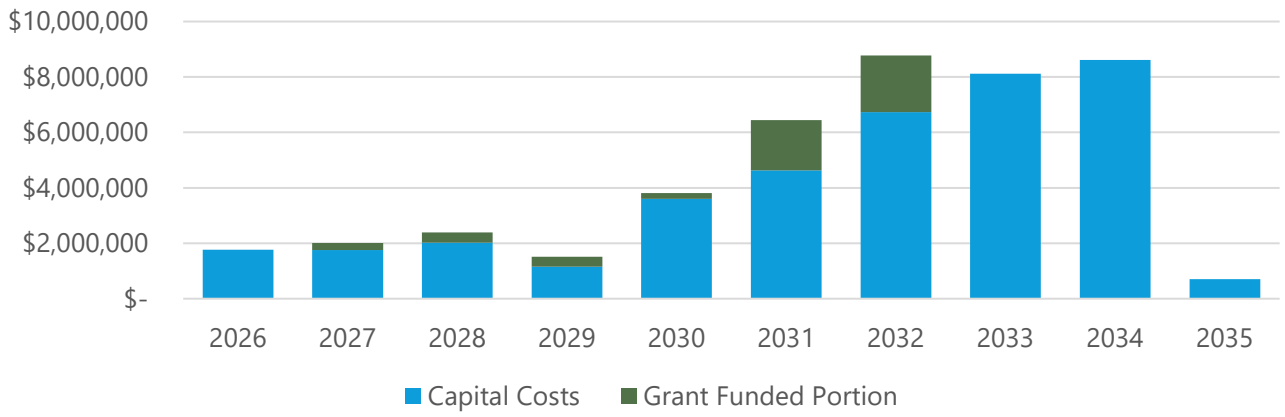
Capital Program

The 2026-2035 capital improvement plan (CIP) was provided by Herrera. Costs were provided by project, by year, and are in 2026 dollars. To estimate the actual spending by year, costs are escalated to the estimated year of construction. Based on discussions with City staff, Scenario 1 assumes 85% grant funding for the following four capital projects – the remainder would be funded by the stormwater utility:

- Woodland Creek at Martin Way Stormwater Improvements Study
- Hawks Ridge Neighborhood Drywell Repair
- Glen Mary Drive Stormwater Improvements
- Wedgewood Manor - Clearwater Court Flood Reduction

Total capital projects for the 2026–2035 period are estimated at $37.6 million in 2026 dollars. After applying cost escalation, total capital spending through 2035 increases to $44.1 million (as shown in **Exhibit 7**). The capital funding strategy assumes no debt financing. Scenario 1 includes $5.1 million in grant funding, while Scenario 2 assumes no grant funding.

Exhibit 7. Stormwater CIP (In Escalated Dollars)



Scenario 1: Recommended LOS + Grant Funding

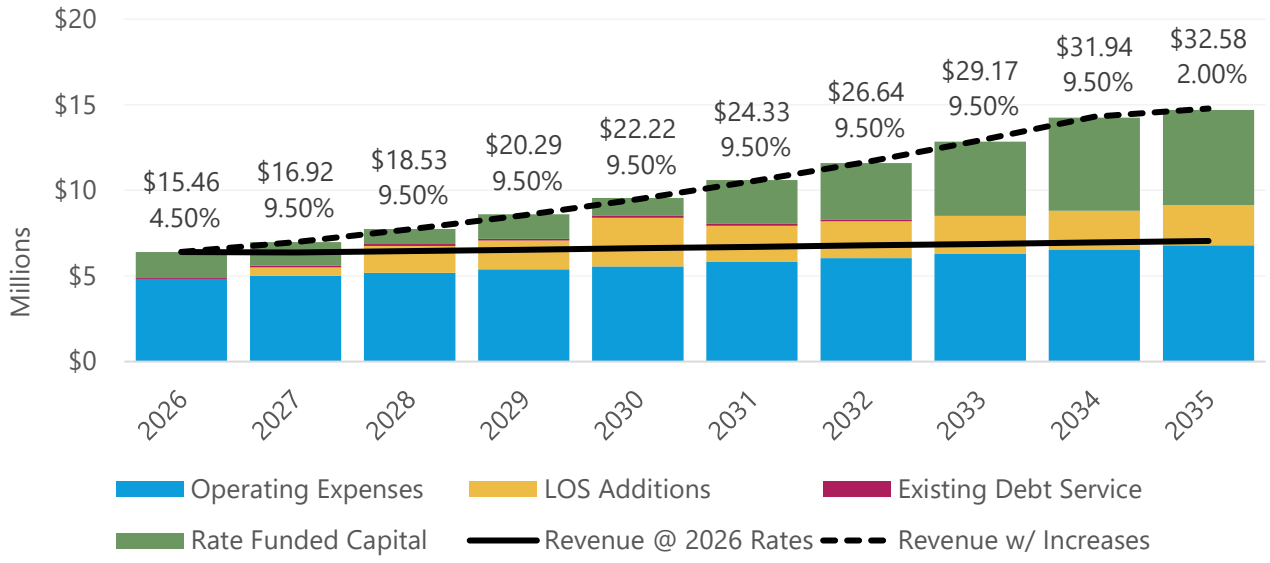
Scenario 1: Recommended LOS + Grant Funding Revenue Requirement Forecast

Exhibit 8 graphically represents the revenue requirement forecast for the stormwater utility from 2026 (the current baseline year) through 2035. The stacked columns represent the costs of the utility such as operating expenses, and cash for capital. The solid black line represents revenue at existing rates, and the dotted black line shows forecasted revenue with rate increases. Above the stacked bars, the monthly charge for single-family customers is noted along with the proposed rate increase percentages for each year.

- **Solid black line:** Revenue at existing rates.
  - Revenue is expected to be $6.4 million in 2026 and grow 1.25% per year with customer growth.
- **Dashed black line:** Revenues with rate increases.
  - As the costs associated with the additional programming and staffing needs are incorporated into the forecast starting in 2027, rate revenue must increase to continue to allow the utility to cash-fund capital projects.
  - Rate revenues are expected to grow to just over $14.8 million per year by 2035.
- **Blue bar:** Cash operating expenses.
  - Operating expenses are based on the adopted 2026 budget and increase with the annual cost escalation assumptions previously discussed.
  - This bar does not include the costs for additional program and staffing needs, which make up much of the operating expense increases during the forecast.
- **Magenta bar:** Existing debt service.
  - The stormwater utility's share of the 2013 revenue bond debt service is approximately $100,000 per year and is expected to be fully repaid in 2033, with the final payment covered by a debt reserve.
- **Yellow bar:** Recommended LOS Operating Costs
  - Operating expenses increased in 2027 to reflect the results of Herrera's LOS analysis and selecting the Recommended LOS from the SSP, which identifies additional program and staffing needs beyond those included in the adopted 2026 budget.

  - » These additional programmatic and staffing needs will help support the City's program elements and long-term goals for the SSP including Flood Reduction, Surface Water Quality Improvement, Groundwater Protection and Recharge, Habitat Improvement, Public Participation (Education, Outreach, and Involvement), Pollution Source Control, Infrastructure Operations and Maintenance, Development Practices, and Stormwater Planning, Administration, and Funding.
- **Green bar:** Cash available for capital (i.e., rate funded capital).
  - » About $1.5 million is available for rate-funded capital in 2026. This amount decreases in 2027 due to higher operating costs associated with the Recommended LOS. By 2035, available funding increases to approximately $5.6 million.

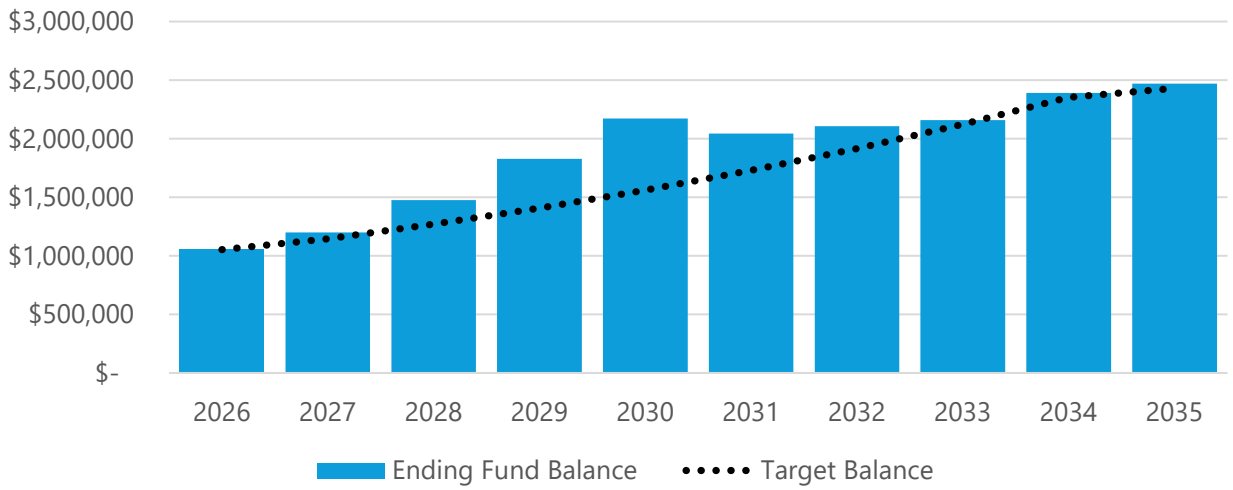
Exhibit 8. Scenario 1: Recommended LOS + Grant Funding Forecast 2026-2035



Scenario 1: Recommended LOS + Grant Funding Forecasted Reserves

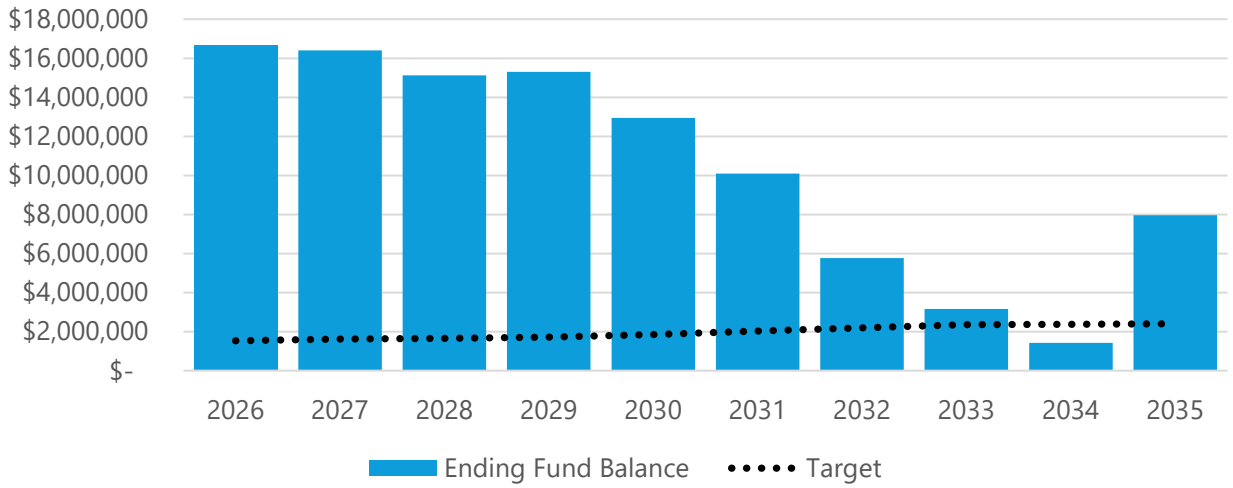
The target operating reserve is equal to 60 days of operating revenues. **Exhibit 9** shows that in each year of the forecast, the utility is expected to meet this target. The operating reserve target for the stormwater utility increases as rate revenues increase with annual rate adjustments.

Exhibit 9. Scenario 1: Operating Reserve Forecast (Fund 403)



The recommended policy for the capital reserve is to achieve a year-end balance of at least 2.0% of the original cost of fixed assets. The projected ending capital fund balance for 2026 is just under $16.7 million. As shown in **Exhibit 10**, this balance is forecast to be gradually drawn down to below target in 2034 as capital expenditures slightly outpace annual rate funded capital. The reserve is forecast to exceed the target in 2035.

Exhibit 10. Scenario 1: Capital Reserve Forecast (Fund 412)

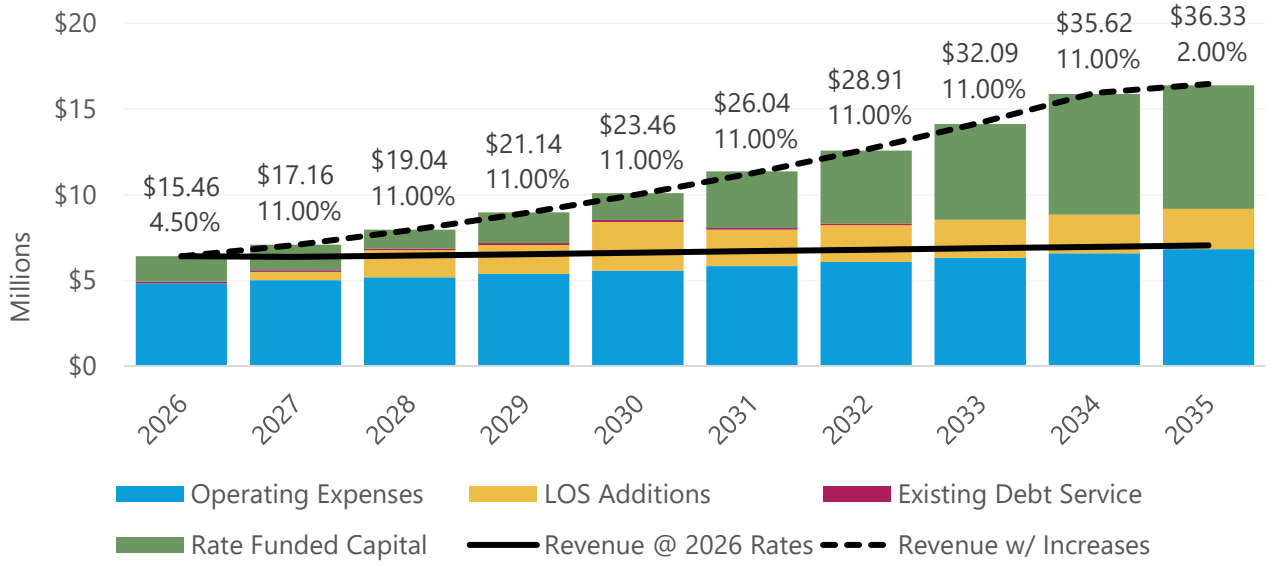


Scenario 2: Recommended LOS + No Grant Funding

Scenario 2: Recommended LOS + No Grant Funding Revenue Requirement Forecast

Exhibit 11 graphically represents the revenue requirement forecast for the stormwater utility through 2035 without any grant funding. Rates need to be higher to cover all capital project expenses, whereas in Scenario 1, some projects were assumed to be partially funded by grants. Rate funded capital in Scenario 2 is expected to be $7.2 million by 2035 compared to $5.5 million in Scenario 1.

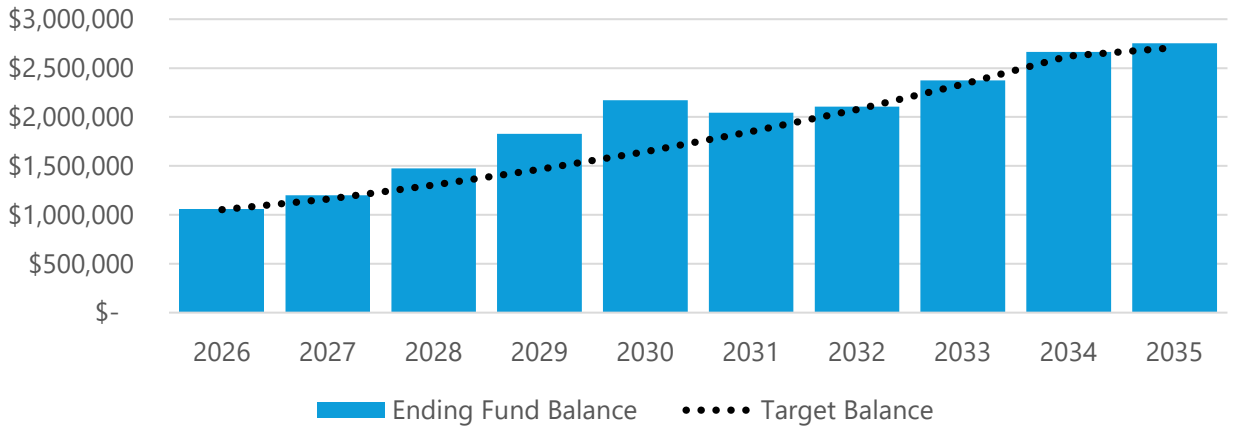
Exhibit 11. Scenario 2: Recommended LOS + No Grant Funding Forecast 2026-2035



Scenario 2: Recommended LOS + No Grant Funding Forecasted Reserves

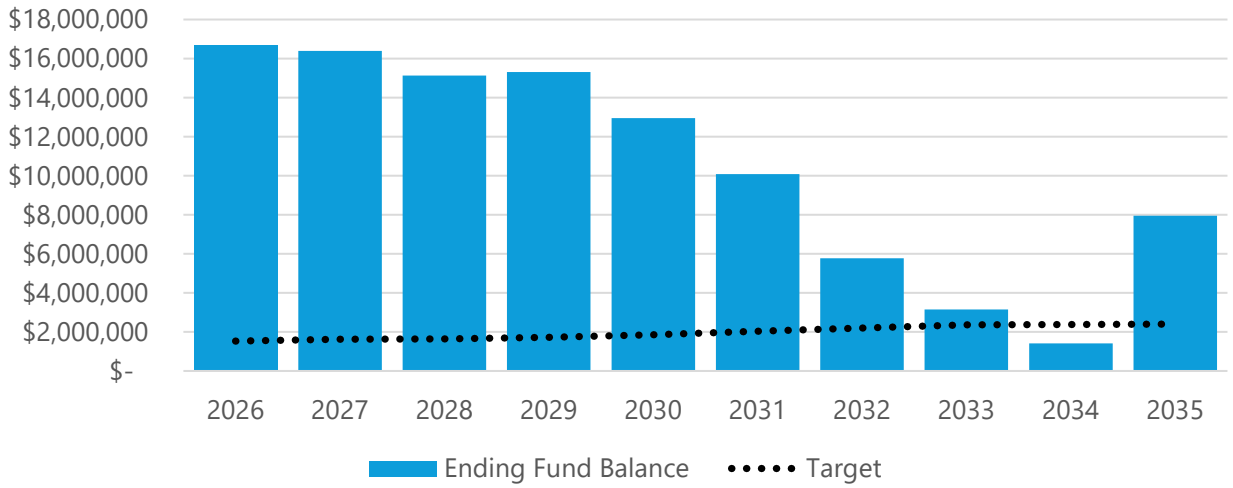
Exhibit 12 shows that in each year of the forecast, the utility is expected to meet the 60-days of operating revenue target.

Exhibit 12. Scenario 2 Operating Reserve Forecast (Fund 403)



As shown in **Exhibit 13**, the capital balance is forecast to be gradually drawn down to below target in 2034 as capital expenditures slightly outpace annual rate funded capital. Just like in Scenario 1, the capital reserve is forecast to exceed the target in 2035 as rate revenues available for capital outpace capital spending scheduled for that year in the forecast.

Exhibit 13. Scenario 2 Capital Reserve Forecast (Fund 412)



4.0 Conclusion

Revenue Requirement & Rate Schedule

To summarize the findings in this report:

- Scenario 1 documents a rate strategy which implements additional programmatic costs and completes the utility's full CIP on schedule with grant funding. To cover the new forecasted financial obligations of the stormwater utility, Scenario 1 requires annual rate increases of 9.50% through 2034.
- Scenario 2, which documents a rate strategy that covers the same expenses as in Scenario 1, but without any grant funding, requires annual rate increases of 11.00% through 2034.

By 2035, annual rate revenue available for capital exceeds $5 million in Scenario 1 and $7 million in Scenario 2. If the annual capital program is lower than these levels, fund balances will grow over time, which may indicate a need to reassess capital funding needs and/or rate levels.

Exhibit 14 and **Exhibit 15** shows the recommended across-the-board utility rate increases for the Recommended LOS with and without grant funding.

Exhibit 14. Scenario 1: Across-The-Board Rate Increases (Minimum Charge Monthly Rate)

Summary of Results	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Increases	**4.50%**	**9.50%**	**9.50%**	**9.50%**	**9.50%**	**9.50%**	**9.50%**	**9.50%**	**9.50%**	**2.00%**
Residential Charges (per developed parcel)										
Single-Family Residential	$15.46	$16.92	$18.53	$20.29	$22.22	$24.33	$26.64	$29.17	$31.94	$32.58
Duplex-Family Residential	$30.92	$33.86	$37.07	$40.60	$44.45	$48.68	$53.30	$58.36	$63.91	$65.19
Non-Residential (per gross acre)										
Very Light	$7.10	$7.77	$8.51	$9.32	$10.20	$11.17	$12.23	$13.39	$14.67	$14.96
Moderately Light	$25.65	$28.09	$30.76	$33.68	$36.88	$40.39	$44.22	$48.42	$53.03	$54.09
Light	$49.63	$54.34	$59.50	$65.16	$71.35	$78.12	$85.55	$93.67	$102.57	$104.62
Moderate	$75.67	$82.86	$90.73	$99.35	$108.79	$119.12	$130.44	$142.83	$156.40	$159.52
Moderately Heavy	$103.03	$112.81	$123.53	$135.27	$148.12	$162.19	$177.60	$194.47	$212.94	$217.20
Heavy	$132.89	$145.52	$159.34	$174.48	$191.05	$209.20	$229.08	$250.84	$274.67	$280.17
Very Heavy	$164.42	$180.04	$197.14	$215.87	$236.38	$258.84	$283.43	$310.35	$339.84	$346.63

Exhibit 15. Scenario 2: Across-The-Board Rate Increases (Minimum Charge Monthly Rate)

Summary of Results	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Increases	**4.50%**	**11.00%**	**11.00%**	**11.00%**	**11.00%**	**11.00%**	**11.00%**	**11.00%**	**11.00%**	**2.00%**
Residential Charges (per developed parcel)										
Single-Family Residential	$15.46	$17.16	$19.04	$21.14	$23.46	$26.04	$28.91	$32.09	$35.62	$36.33
Duplex-Family Residential	$30.92	$34.32	$38.10	$42.29	$46.94	$52.10	$57.83	$64.19	$71.26	$72.68
Non-Residential (per gross acre)										
Very Light	$7.10	$7.88	$8.74	$9.70	$10.77	$11.96	$13.27	$14.73	$16.35	$16.68
Moderately Light	$25.65	$28.48	$31.61	$35.09	$38.95	$43.23	$47.99	$53.26	$59.12	$60.30
Light	$49.63	$55.09	$61.15	$67.87	$75.34	$83.62	$92.82	$103.03	$114.37	$116.65
Moderate	$75.67	$83.99	$93.23	$103.49	$114.87	$127.51	$141.53	$157.10	$174.38	$177.87
Moderately Heavy	$103.03	$114.36	$126.94	$140.90	$156.40	$173.61	$192.70	$213.90	$237.43	$242.18
Heavy	$132.89	$147.51	$163.74	$181.75	$201.74	$223.93	$248.56	$275.91	$306.26	$312.38
Very Heavy	$164.42	$182.51	$202.58	$224.87	$249.60	$277.06	$307.53	$341.36	$378.91	$386.49

Sample Bills

Non-residential (Group 2) stormwater accounts, (commercial, multi-family, and mobile home park properties), are billed a rate per gross acre rather than a flat fee. Under Ordinance No. 1648, each property falls into one of seven rate categories based on its percentage of impervious surface, ranging from Very Light (0–10%) to Very Heavy (85–100%).

Each category has its own rate per gross acre, increasing from $7.10 an acre for Very Light properties up to $164.42 an acre for Very Heavy properties. To calculate a property's monthly stormwater bill, that per-acre rate is multiplied by the property's total gross acreage. In other words, larger properties and properties with more impervious surface both pay more, since both factors are correlated to stormwater runoff. A sample of accounts from each of the seven categories was reviewed to show the acreage and monthly bill of a representative account within each category, summarized below.

The representative figures below come from real Group 2 accounts, not a hypothetical estimate. A sample of accounts in each category was pulled from the City's billing data by City staff and averaged, giving a realistic, verifiable picture of what a typical property pays.

Exhibit 16. Group 2 Sample Bills

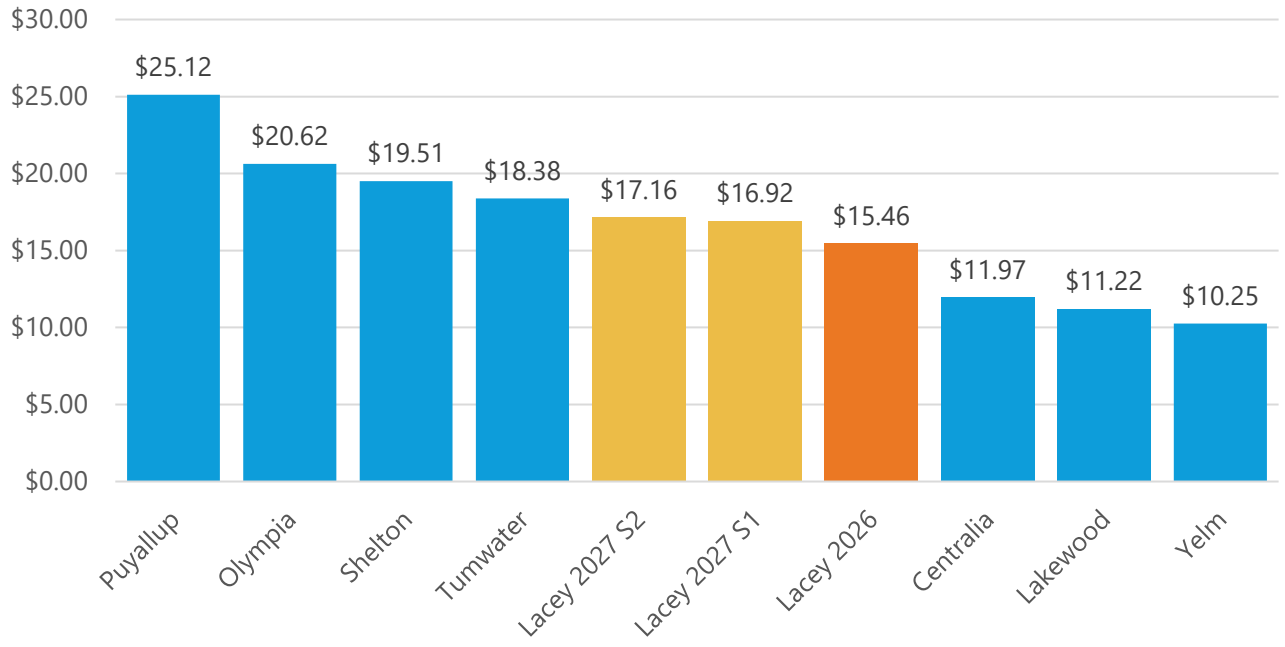
Rate Category	% Impervious Surface Area	Rate Per Gross Acre	Avg. Gross Acreage (of sample)	Avg. Monthly Bill (of sample, 2026)
Very Light	0% to 10%	$7.10	104.51	$741.58
Moderately Light	>10% to 25%	$25.65	21.97	$563.74
Light	>25% to 40%	$49.63	16.41	$814.30
Moderate	>40% to 55%	$75.67	26.36	$1,994.62
Moderately Heavy	>55% to 70%	$103.03	30.59	$3,151.79
Heavy	>70% to 85%	$132.89	38.19	$5,075.44
Very Heavy	>85% to 100%	$164.42	16.77	$2,757.05

Single-Family Residential Rate Comparison

As a resource for the City and its customers, a rate survey of comparable utilities was performed. **Exhibit 17** shows each jurisdiction's 2026 monthly single-family residential (SFR) rate. Note that each jurisdiction has a unique set of geographic traits, customers, and system characteristics that can have a significant impact on rates. However, all jurisdictions included in the rate comparison are Western Washington cities that are all subject to the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit.

Some cities embed their city utility tax in their rates, while others (like Lacey) separately itemize the tax on customer bills above the stated rates. We do not have data on the billing practices of other cities, so there may or may not be a tax embedded in other utility rates. For this analysis, the City utility tax was excluded from the City of Lacey rates.

Exhibit 17. Monthly 2026 Single-Family Residential Stormwater Rates



S2 = Scenario 2; S1 = Scenario 1

Updating This Study's Findings

It is recommended that the City revisit the study findings during the forecast period to check that the assumptions used are still appropriate and that no significant changes have occurred that would alter the results of the study. The City should use the study findings as a living document, comparing study outcomes to actual revenues and expenses each year. Any significant or unexpected changes may require adjustments to the rate strategy recommended in this report.

STAFF REPORT

Council Worksession
July 28, 2026

Subject: 2026 Sidewalk Repair Project

To: Lacey City Council
Prepared by: Aubrey Collier, City Engineer
Department Director: Vince McGowan, Interim Public Works Director
Final Review: Rick Walk, City Manager

Purpose: Informational

Recommendation: N/A

Brief: Public Works advertised the 2026 Sidewalk Repair project on June 23, 2026 and will bring a bid award proposal to Council on August 3, 2026. This briefing will provide additional background on the project, community engagement efforts, and the City's approach to sidewalk repair.

Alternatives:
N/A

Prior Review:
N/A

Advisory Board Recommendation(s):
N/A

Fiscal Impact:
Budgeted Item: No
Amount: Not applicable
Project Code: Not applicable
Funding Source: Not applicable

Attachments:
1. Sidewalk Damage & Marking Policy
2. Tree Replacement Policy for Sidewalk Replacement Projects
3. Tree Care Guide

Policy or Legal Alignment:
N/A

The City has a three-tiered approach to sidewalk safety. The first-tier response is focused on mitigating safety concerns by improving visibility of hazards installing sidewalk markings and asphalt wedges, performed by City staff. Please see the attached Sidewalk Damage & Marking Policy.

The City's second-tier response involves structural work that existing City staff can perform to address hazards such as concrete grinding and sidewalk panel lifting. City staff use vacuum technology called a "sidewalk sucker" to lift the sidewalk panel, then minor root trimming is done at the surface level, and the panel is set back down. City staff do not install root barriers during these minor repairs for several reasons. Root barrier installation would require additional equipment and staff resources to excavate 2 ft below ground, perform extensive root pruning, install root barrier, and backfill and compact soils. This work would also be more complex in working through utility conflicts and repairing irrigation lines and has a much higher likelihood of causing damage to and destabilizing the tree.

The City's third-tier approach focuses on a worst first approach where our goal is to permanently address the issue and prevent future hazards by installing appropriate tree species, root barriers, and other measures to ensure long-term durability. This work is contracted out and includes removing the tree and root ball, placing new root barrier and top soil, regrading and replacing concrete, repairing irrigation lines, planting a new tree appropriate species per arborist, lawn and landscape restoration, and at times may also include roadway/asphalt repairs.

The 2026 sidewalk repair program is focused on sidewalks located in the Jubilee neighborhood. The City recognizes both the value of Jubilee's tree canopy and the serious safety concerns caused by lifted sidewalks. For several years, the City has received complaints from Jubilee residents regarding sidewalk trip hazards. Addressing these hazards while balancing environmental impacts has been a key focus throughout planning and development of this year's project.

This project has been under evaluation for several years. In 2022, the City began developing a formal Sidewalk Damage Warning/Marking Policy in response to numerous complaints about damaged sidewalks throughout Lacey. In 2023, a citywide sidewalk survey identified more than 19,000 sidewalk locations with offset, cracking, or spalling issues, including many within Jubilee. Based on legal guidance and limited funding, sidewalk repairs across the city are prioritized using a "worst-first" approach to address the most critical hazards first.

Throughout 2024, the City performed temporary sidewalk repairs in Jubilee to help reduce immediate tripping hazards. However, because tree roots are the primary

cause of the damage, temporary repairs alone do not provide a lasting solution. In 2024 the City budgeted for permanent repairs in the neighborhood.

The City carefully evaluated alternatives, including root pruning, grinding, rubberized pavement, moving the sidewalk, and other temporary repair methods. While these options may reduce hazards, they either do not address the underlying issue, provide only temporary relief, are significantly more expensive, or are not feasible due to right-of-way constraints, etc.

More extensive root pruning, as would be required in order to install root barrier, can cause damage to the tree and can also cause destabilization in wind storms, and may ultimately result in tree loss. This was the case in the City of Dupont, which is why they no longer take this approach for sidewalk repairs.

For these reasons, the City's recommended approach is to fully replace the damaged sidewalk panels and remove trees where necessary. The project also includes installing root barriers and replanting with more appropriate tree species, as recommended by an arborist, to help reduce future conflicts between tree roots and sidewalks. The goal is to provide a safer, long-term solution while preserving the neighborhood's tree canopy over time.

The City has also worked extensively with Jubilee HOA leadership throughout this process. In early 2025, after concerns were raised by two residents, the City paused the project and removed Jubilee from the 2025 sidewalk repair schedule to allow for additional discussions. In May 2025, Jubilee HOA Board representatives informed City staff that those concerns raised by the two residents did not reflect the views of the broader community and requested that future project discussions occur directly with HOA leadership.

In 2026, the City resumed project planning and provided the HOA with detailed information, including which trees would be affected. After receiving and responding to 56 HOA questions and meeting with HOA representatives to discuss options, the City offered three potential paths forward:

1. Proceed with the full project
2. Reduce the project scope to only the worst locations
3. Avoid tree removals and continue only temporary repairs

Following review of this information and a community vote, the Jubilee HOA informed the City that approximately 90% of participating residents supported moving forward with the full project. In June 2026, the HOA provided formal written approval.

Bids for this project were opened on July 9, 2026 and will be brought to Council for consideration for award on August 3, 2026. At that time the Council will have the choice to award the contract to the lowest responsible bidder, or reject all bids. Modifications to the project scope can not be made after the project has been bid.

Once a contract is executed, the City plans to hold an informational meeting for Jubilee residents to review project details and schedule. The City will also create a project webpage with detailed information, and will send a letter to neighborhood residents directing them to the webpage and explaining how to sign up for project email updates.

On a past sidewalk replacement project, the City found that some residents were not aware that their new trees needed to be watered. As a result, some of the new trees replaced did not survive. In 2025, the City wrote a policy to address this issue. Please see the attached Tree Replacement Policy for Sidewalk Replacement Projects, which we now implement for all projects, including the 2026 Sidewalk Repair Project. This policy requires additional outreach to the homeowner or HOA responsible for tree maintenance. Staff provide a tree care guide, and a tree watering bag if there is no irrigation in place. If the responsible party does not wish to provide the minimum tree care needed to keep the tree alive, then the City will not require a new tree to be planted at that location.

City of Lacey
Sidewalk Damage Warning/Marking Policy
August 22, 2025

Purpose:
This policy defines the process by which the City of Lacey surveys, inspects, documents, and installs warning markings for damaged sidewalks in the City Right of Way.

This policy does not set any legal standard and is not intended to alter the City's legal obligations. This policy explicitly acknowledges that the elected City Council has authority to approve the budget for repairs under this policy.

Background:
The City of Lacey has sidewalks with vertical displacements between panels. Based on guidance from Washington Cities Insurance Authority (Document PWK.09 Sidewalks, RECOMMENDED CONTROLS: Inspection and Maintenance, Item 5) the city will place warning markings where these vertical offsets or other damage are such that a "reasonably cautious person" would consider the offset or damage dangerous.

For purposes of this policy, a "reasonably cautious person" is an alert and attentive individual who is functioning in a lawful manner that is appropriate for the facility and conditions, while demonstrating due care for the current conditions on the sidewalk. Such due care includes, but is not limited to, keeping a proper lookout, and being aware of weather or other environmental conditions that may impact a pedestrian's ability to see and avoid conditions of the sidewalk. Pedestrians walking at night should exercise increased care.

This policy acknowledges that there are a large variety of conditions of a sidewalk, and expects the reasonably cautious person to identify offsets or other damage, and make a conscious choice whether to encounter that offset or other damage, or choose a path to avoid such offset or other damage.

Inspection:
City Sidewalks should be inspected biennially (as such resources and personnel allow) for vertical displacements, and other damage. The location and extent of the displacement, or damage will be documented. Additionally, damage that is reported by citizens, employees, and other sources will also be inspected and documented.

Complaints/Reports:

- Sidewalk complaints or reports from the public can be received through LaceyWorks (311 System), emails, phone calls, letters, etc. All complaints and reports will be recorded and tracked.
- Sidewalk complaints should be investigated and documented by staff, as soon as reasonably possible. The next business day or as soon as staff are available should be sufficient. The offset will be painted during the inspection if it meets the criteria below.
- The finding should be prioritized according to the prioritization list below.
- The complainant should be contacted, informed of the results of the findings, and informed of the priority of the repair.

Warning/Marking:

Warning markings shall be placed for all vertical displacements over 0.75 inches. The placement of paint is weather dependent.

Markings will be paint stripes approximately 2" wide and approximately centered on the vertical offset. Markings will be approximately the length of the offset. The color of the warning stripe will be white or pink. (White and pink are the only colors on the 811 chart that don't identify the location of a utility)

Warning Markings will be inspected as workload allows, but preferably annually to ensure that the markings are still visible.

Funding:

Due to budget constraints, the amount of sidewalk repair work (including the cost of design, and administration) will be limited to the amount approved by city council in the annual budget. When all funding is depleted, sidewalk repairs will be paused until additional funding and direction is received.

Repair Prioritization:

The damage reported through the sidewalk inspection and other sources will be prioritized for repairs based on the size of the offsets, from highest (Priority 1) to lowest (Priority 4). Vertical offsets in areas like hospitals, elder care facilities, clinics, etc., may take precedence for repairs with a lower priority rating. In most cases Priority 1 (Greater than 2") offsets will be repaired first followed by repairs of Priority 2 (1.25" to 2") offsets.

- Priority 1: Greater than 2".
- Priority 2: 1.25" to 2".
- Priority 3: 0.75" to 1.25".
- Priority 4: 0.25" to 0.75".

Temporary Asphalt Wedges:

Asphalt wedges may be placed as a temporary fix for offsets large enough to have the asphalt stick and stay on the concrete. The wedges will be placed in a manner to ramp up to the offset. This temporary fix is intended to give a visual of the offset and provide a ramped surface for safer travel. Asphalt wedges will not be painted as the black asphalt wedge provide a visual contrast to the grey/white concrete sidewalk.

Sidewalk Replacement by HOA or Property Owners:

Home Owner Association's OR property owners may replace sidewalk panels at their own cost. However, prior to replacing a sidewalk panel the HOA or their contractor will be required to obtain a ROW permit from the City of Lacey. The contractor replacing the sidewalk will be required to be licensed bonded and insured and meet all the requirements of the City of Lacey Development Guidelines and Public Works Standards.

By:

Rick Walk, City Manager

8/27/2025

Date

Tree Replacement Policy for Sidewalk Replacement Projects

Purpose

This policy establishes the City's process for managing street trees impacted by sidewalk replacement projects. It ensures that replacement trees are properly cared for and survive long-term, while clarifying the responsibilities of property owners, home owners associations (HOAs), and the City.

Policy

When sidewalks are replaced by the City due to damage caused by tree roots, the City may remove the tree and offer to plant a replacement tree. Replacement trees require consistent watering during establishment (typically the first 3 years). Property owners or HOAs must agree in writing to provide watering before a replacement tree will be planted.

If a Tree Care Agreement Form is not secured, the City will complete sidewalk repairs without planting a replacement tree. Replacement trees will not be planted by the City at a future date after the project has been completed.

Process

1. Notification and Outreach
    - The City will attempt to meet with the HOA Board or representative in order to explain the project and the policy and to confirm whether the HOA operates and maintains an irrigation system in the landscape strip.
    - Prior of removal of a tree for sidewalk replacement, the City will also notify the affected homeowner and the HOA (if applicable) in writing.
    - The notification will include:
        - An explanation of why the tree will be removed.
        - Options for receiving a replacement tree, including that a new tree will not be planted if the agreement is not signed in advance.
        - Tree Care Guidelines that give information on responsibilities for watering and care.
        - A Tree Care Agreement Form that must be signed and returned.
2. Tree Care Agreement
    - The property owner/HOA must sign a written agreement committing to:
        - Providing watering at a minimum of 5 gallons, twice per week, throughout the dry season (typically June – September, adjusted for weather) and more frequently during extreme heat.

        - Basic care such as mulch maintenance and weed removal at the tree base.
    - The agreement must be returned within 30 days of the notification.
    - If the irrigation system in the landscape strip in which the tree is planted is operated and maintained by the HOA, the HOA shall sign the agreement. Otherwise, the agreement shall be signed by the property owner with acknowledgement from the HOA.
3. Tree Planting
    - Once the agreement is received, the City will schedule and complete planting of a replacement tree as part of the sidewalk replacement project.
    - The City's contractor will provide initial watering and mulching at planting.
    - The City will notify the home owner/HOA that the tree has been planted and is now their responsibility.
4. Failure to Return Agreement
    - If the signed Tree Care Agreement is not received, the City will:
        - Proceed with the sidewalk replacement
        - Not plant a replacement tree.
    - Property owners may plant a tree at their own cost at a later date, following the City permitting requirements.
5. Monitoring and Enforcement
    - City staff may conduct spot checks on newly planted trees during the three-year establishment period.
    - If neglect is observed, the City may notify the property owner/HOA of non-compliance.
    - If the property owner/HOA fails to water and the tree dies due to neglect, the property owner/HOA is responsible for removing and replanting an approved tree, including obtaining applicable permits.

Roles and Responsibilities

City:

- Remove trees and tree roots where necessary for sidewalk replacement projects.
- Provide notification and outreach materials.
- Plant replacement trees where agreements are in place.
- Provide the homeowner/HOA with a tree bag for each tree replaced.
- Offer guidance on tree care.

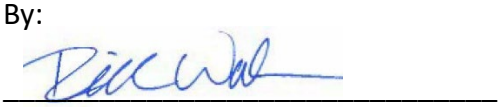
Homeowners/HOAs:

- Sign and return the Tree Care Agreement.
- Provide ongoing watering and basic maintenance during the three-year establishment period.
- Notify the City of issues (e.g., pests, storm damage)

Forms

- Homeowner/HOA Outreach Template
- Tree Care Agreement Form
- Tree Care Guidelines

By:



Rick Walk, City Manager

November 24, 2025

Date

City of Lacey Tree Care Guide

Watering

Trees need to be watered regularly during their first three summers after planting. Water newly planted trees with 5-10 gallons of water, twice a week, throughout the dry season (June – September) and during other dry spells. A dry spell can be characterized by two to three weeks without significant rainfall.

Water slowly so that moisture soaks deeply into the soil and water doesn't run away from the root zone. Mulching is a great way to hold water in the soil for your new trees

Mulch

Mulch reduces evaporation, delivers organic nutrients, and helps prevent the growth of weeds. It is very important to mulch your new trees. Mulching prevents lawn mowers and string trimmers from getting close to the tree and damaging the trunk, which is the number two cause of tree failure. Mulching is second to watering in importance to the health of newly planted trees.

But be sure to pull the mulch away from the bark of the tree in a three-inch radius to prevent fungus growth or infection. Remember the 3-3-3 Rule: 3 inches away from the trunk of the tree, about 3 inches deep, in about a 2-3 foot radius. Do not "Volcano Mulch" your tree by piling mulch up against the bark.

Removing Weeds & Grass

Keep all weeds, grass and other plants 18" from the trunk of your new tree.

Weeds and grass in your tree's root zone absorb water and nutrients that should be reaching the tree's roots. They can greatly stress your new trees by creating a tougher establishment zone.

Removing weeds by hand reduces the risk of trunk damage from lawn mowers and string trimmers—a leading cause of tree failure.

STAFF REPORT

Council Worksession
July 28, 2026

Subject: Sidewalk Capital Fund Strategy

To: Lacey City Council
Prepared by: Rick Walk, City Manager
Department Director: Troy Woo, Finance Director TW
Vince McGowan, Interim Public Works Director VMc
Final Review: Rick Walk, City Manager RW

Purpose: Briefing

Recommendation: N/A

Brief: City Council will be briefed on a proposed strategy to establish dedicated funding for small scale sidewalk projects to complete small gaps in the City's sidewalk network. The City Council requested staff to develop a strategy for Council deliberation as a part of the April 14, 2026 Council Worksession discussion and direction to schedule the Transportation Benefit District Ballot measure for the February 2027 election.

Prior Review:
City Council Work Session – March 10, 2026 Meeting Packet Link
City Council Work Session – April 14, 2026 Meeting Packet Link

Advisory Board Recommendation(s):
N/A

Fiscal Impact:
Budgeted Item: No
Amount: $300,000
Project Code: Not applicable
Funding Source: Not applicable

Attachments:
N/A

Policy or Legal Alignment:
N/A

At the City Council Worksessions held on March 10th and April 14th, 2026, (meeting packet links are in the prior review section of this staff report), the City Council discussed the City's Transportation Benefit District program. The Transportation Benefit District (TBD) is a funding tool authorized by the Revised Code of Washington (RCW) and can be utilized by local governments to help fund transportation improvements. Based on original ballot language passed by Lacey voters in 2027, the Lacey TBD is funded by a .02% sales tax to:

> "…fund a *Pavement Management Program to provide for a pavement maintenance and preservation to extend the life of the city street system through the use of structural rehabilitation, pavement repair patching, asphalt resurfacing, slurry seal, other resurfacing methods, and pedestrian improvements including repair or replacement of sidewalks and construction of curb ramps in conjunction with the Pavement Program".*

This tax on average has provided approximately $3.8 Million per year in revenue dedicated to the City's street and sidewalk maintenance program. The authorization for this tax expires 10 years from the date of voter approval which will be February of 2027, unless renewed by another ballot measure approved by Lacey voters.

At the previous Worksessions, staff briefed the City Council on the history and performance of the City's TBD program, the original ballot measure, the process for placing a renewal measure on a future ballot and a draft communication strategy. The City Council discussed potential dates for the TBD renewal measure and whether the original ballot language should be revised to allow TBD funds to be used for sidewalk capital projects to complete small gaps in the City's sidewalk network. Council defined the sidewalk gaps as areas that are in proximity to a larger project, such as a street overlay project, where there is a short gap in the sidewalk system that would otherwise safely connect pedestrians to a priority destination (i.e. parks, trail, school, services, etc.). Based on the subsequent conversation, the Council agreed to place a renewal ballot measure on the February 2027 special election date. Council also agreed to keep the original ballot language, provided staff would develop a financial strategy to fund the construction of sidewalks that would eliminate gaps in the sidewalk network.

The purpose of this worksession briefing it to introduce to Council a strategy for how the City could fund small sidewalk projects that would meet the Council's intent of filling in key gaps in the sidewalk network.

Currently, the City uses approximately $300,000 in motor vehicle fuel tax (MVFT) to fund sidewalk maintenance activities. Motor vehicle fuel tax must be used for transportation systems but can be used for both capital and maintenance activities. The maintenance activities currently funding by the MVFT can be shifted to the TBD fund, which will provide $300,000 a year for sidewalk projects that would meet Council's intent of filling gaps in the city's sidewalk network.

In addition to the funding strategy, staff recommends the City Council provide guidance on how "sidewalk gap" projects are identified and qualify for sidewalk capital funding. The following are draft policy bullets for the City Council's consideration and discussion.

Purpose

- Create a safe, connected, accessible pedestrian network
- Fill in sidewalk gaps to improve safety, mobility, and ADA compliance
- Utilize funds to construct sidewalks to fill identified gaps associated with larger projects such as TBD overlay program or utility project to leverage existing projects for cost efficient gap-filling.
- Unused funds will roll over to following budget year.

Scope

- Integrate small sidewalk additions whenever feasible
- Applies to all TBD pavement overlay, utility and parks projects
- Addresses gaps within the project limits, and adjacent to the project limits (typically <300 ft/one intersection

Evaluation Process

- Feasibility Screening (impacts to cost, utility conflicts, permitting, ADA, right-of-way needs, environmental)
- Ability to meet City Standards, or qualify for an exception

Criteria

- High pedestrian traffic
- Safety priority areas
- Examples: near bus stops, school routes, parks, retail, trail connections, healthcare facilities, community centers, event venues, senior services

The City designs all capital projects to meet minimum City standards and regulations. This can and often does add substantial cost to completing a missing link to the pedestrian system. To allow the ability for the city to construct minimal sidewalk improvements that would address a high pedestrian volume, safety and ADA standards, amendments to the City's Development Guidelines and Public Works Standards would need to be considered to provide the opportunity to install temporary improvements to address the immediate safety needs. Pending Council direction, staff can begin work on proposed amendments to bring before the Planning Commission for review and recommendation to City Council.

Finally, the above proposed financial strategy and policy would allow staff to address gaps in the sidewalk network identified as part of the scope of a larger project until such time as the City's Pedestrian and Bicycle Plan is updated. Work will begin on the Pedestrian and Bicycle Plan in 2027. As part of the update, staff will be able to develop an inventory of the existing pedestrian and bicycle network, identify future projects to expand these systems and identify existing gaps or barriers. This work, once completed, will provide Council and

staff information to proactively identify high priority pedestrian projects to be incorporated into the City's infrastructure capital program in the future.

In summary, staff have identified $300,000 per year that can be used to construct sidewalks within the scope or adjacent to a larger capital project to eliminate gaps in the pedestrian network. Staff also has recommended amending the City's Development Guidelines and Public Works standards to include exceptions to the City's street frontage standards provided, safety and accessibility considerations are met. Finally, the upcoming update to the City's Pedestrian and Bicycle Plan will include an inventory of the City's pedestrian and bicycle network, identify gaps in the system, creating an information resource for the City to proactively address missing links in the system.