City of Springfield
Total Maximum Daily Load Implementation Plan

March 2024

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March 2024

Section 1 – Background & Implementation Plan Goals

The Willamette River and many of its tributaries do not meet several State of Oregon water quality standards, including standards for temperature, bacteria, and mercury. State water quality standards ensure the protection of aquatic life and beneficial uses such as water contact recreation, fish consumption, and drinking water. When State water quality standards are not met, the federal Clean Water Act requires the establishment of a Total Maximum Daily Load (TMDL), which is a clean water plan. A TMDL determines how much pollution can be added to the river without exceeding water quality standards.

Thus, on September 21, 2006, the Oregon Department of Environmental Quality (DEQ) issued the Willamette Basin TMDL as an Order and submitted the TMDL to the Environmental Protection Agency (EPA) for approval. The TMDL was approved by the EPA on September 29, 2006. On November 22, 2019, DEQ submitted its Final Revised Willamette Basin Mercury TMDL to EPA. EPA subsequently disapproved this TMDL and then EPA re-issued a revised TMDL on February 4, 2021, providing it to DEQ for implementation.

As part of the Willamette Basin TMDL, DEQ developed a Water Quality Management Plan (WQMP) to describe the overall framework for implementing the Willamette Basin TMDL. The WQMP describes activities, programs, legal authorities, and other measures for which DEQ and other designated management agencies (DMAs) have regulatory responsibility.

A DMA is a federal, state, or local governmental agency that has legal authority of a sector or source contributing pollutants and is identified as such by the DEQ in a TMDL. TMDL implementation activities are carried out under existing regulatory authorities, programs, and water quality restoration plans as well as by TMDL Implementation Plans that certain DMAs will develop in fulfillment of the requirements of this TMDL.

The City of Springfield, along with other cities and agencies in the Willamette Basin, has been named a DMA by DEQ because Springfield has legal authority over municipal sources contributing pollutants to the McKenzie and Willamette rivers within its jurisdictional authority.

Springfield is located within the Upper Willamette River Basin. The area within Springfield's Urban Growth Boundary (UGB) drains approximately 14,500 acres of land that flows via the municipal separate storm system to the McKenzie River, Middle Fork Willamette River, and/or the Mainstem Willamette River. The Middle Fork Willamette borders the southern edge of Springfield's UGB for about 4 miles. The Mainstem Willamette flows between Glenwood and Springfield for about 2.75 miles before it flows under Interstate 5 to Eugene's jurisdiction. The McKenzie River borders Springfield's northern UGB, in part, for about 8 miles. Other waterbodies in Springfield include river side channels and tributary streams, including the historic Springfield Mill Race and Cedar Creek, which are salmon bearing waterways, as well as other open channels and drainage ways, and a piped storm sewer system.

The Willamette River is currently listed as a water quality limited waterway due to elevated temperatures, elevated mercury in fish tissues, and elevated bacteria levels. The McKenzie River is listed as a water quality limited waterway due to elevated temperatures.

The required components of the TMDL implementation plan are described in Oregon Administrative Rule (OAR) 340-042-0080, excerpted below.

(4) Persons, including DMAs other than the Oregon Department of Forestry or the Oregon Department of Agriculture, identified in a WQMP as responsible for developing and revising sector-specific or source-specific implementation plans must:

(a) Prepare an implementation plan and submit the plan to the Department for review and approval according to the schedule specified in the WQMP. The implementation plan must:

a. Identify the management strategies that the MDA or other responsible person will use to achieve load allocations and reduce pollutant loading;

b. Provide a timeline for implementing strategies and a schedule for completing measurable milestones;

c. Provide for performance monitoring with a plan for periodic review and revision of the implementation plan;

d. To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements; and

e. Provide any other analyses or information specified in the WQMP.

(b) Implement and review the plan as needed.

This document is the City of Springfield's Implementation Plan (IP, or the "Plan") for the TMDL program, a key component of the federal Clean Water Act. The overall goal of this Plan is to identify and prioritize measures that the City will take to minimize, to the extent practicable, temperature, bacteria, and mercury contributions to the McKenzie and Willamette rivers and other surface waters within the jurisdictional control of the City. It focuses on a continued multi-faceted approach of education, inspection, municipal operations, and partnerships to reduce specific sources of contamination within the City's jurisdiction to improve water quality.

The City of Springfield's first TMDL IP was approved by the DEQ on April 16, 2009 and was implemented from 2009-2014 (first plan cycle). The City's second TMDP IP was approved by DEQ in 2014 and was implemented from 2014-2019 (second plan cycle). The City's third TMDL was approved by DEQ in 2019 and guided the next several years of TMDL implementation until it was updated in March of 2022 to address mercury requirements in the revised *TMDL for Mercury in the Willamette Basin*, *Oregon* (February 4, 2021). The updated March 2022 plan has guided the remainder of the third plan cycle and is the current plan in effect.

This Plan is the fourth cycle TMDL IP for the July 1, 2024 through June 30, 2029 timeframe. A 5 Year Review of Springfield's 2019 TMDL IP (updated in 2022) was completed in conjunction with these revisions. The submission of the updated implementation plan and 5 Year Review are required per OAR 340-042-0080. In addition, 5 Year Reviews were completed to evaluate the 2009 and 2014 TMDL IPs.

This Plan compliments Springfield's existing stormwater management efforts stemming from the Clean Water Act, Endangered Species Act, Safe Drinking Water Act, and Springfield's Council-endorsed "Key Outcomes for Stormwater." The "Key Outcomes" ensure that stormwater management is focused on creating safe, clean, and attractive open waterways that become community amenities.

The overall goal of this plan and Springfield's other water quality programs is to ensure that the McKenzie and Willamette rivers, and their tributaries, meet state water quality standards and protect aquatic life.

Section 2 – City of Springfield Drainage & Water Quality Programs

2.1 Springfield's Drainage Context

The City of Springfield is located in the Upper Willamette Drainage Basin, primarily on the east side of the Willamette River. Springfield is surrounded by rivers, with the McKenzie River to the north and the Middle Fork Willamette River to the south (Map 1). The Mainstem Willamette River flows along the east side of Glenwood in southwest Springfield. The Coast Fork joins the Middle Fork of the Willamette just southwest of the City's Urban Growth Boundary (UGB) to form the Mainstem, which flows generally northward before joining with the McKenzie, northwest of Springfield. While portions of the McKenzie and Middle Fork are contiguous to the City's UGB, only the Mainstem Willamette flows completely through Springfield's jurisdiction (from approximately the confluence of the Middle Fork with the Coast Fork to the Interstate 5 bridge, where it flows into Eugene's jurisdiction).

The majority of Springfield's stormwater runoff drains through an integrated network of pipes and open channels, discharging directly to the McKenzie, Middle Fork Willamette, or Mainstem Willamette rivers, or to a tributary of those rivers. The stormwater system includes approximately 213 miles of storm pipeline, 5,294 catch basins, and 3,042 maintenance access holes. The City also owns and maintains many vegetated and structural stormwater treatment facilities.

The major natural waterways flowing to the McKenzie are the 48th Street Channel, Cedar Creek, South Cedar Creek, Keizer Slough, and Maple Island Slough. The main natural waterways flowing to the Willamette include the Mill Race, Q-Street Floodway, Channel 6, and Irving Slough. The natural waterways that discharge to the Middle Fork Willamette are Quarry and Gorrie creeks.

A small portion of the drainage from the McKenzie River seasonally flows through the stormwater drainage system in the City and is directed into surface waterways (Irving Slough and Pierce Channel) which eventually flow to the City of Eugene, and then to the Willamette. In this fashion, a small percentage of McKenzie River water is diverted into the Willamette River, well upstream of the confluence of the two rivers.

There are 15 major drainage basins within Springfield that drain to the McKenzie and Willamette rivers (Table 1). Two of the basins (West Springfield Q Street Basin and Q Street Floodway Basin) drain to Eugene and then to the Mainstem Willamette at Alton Baker Park.

Table 1 Basin Drainage Area by Waterway

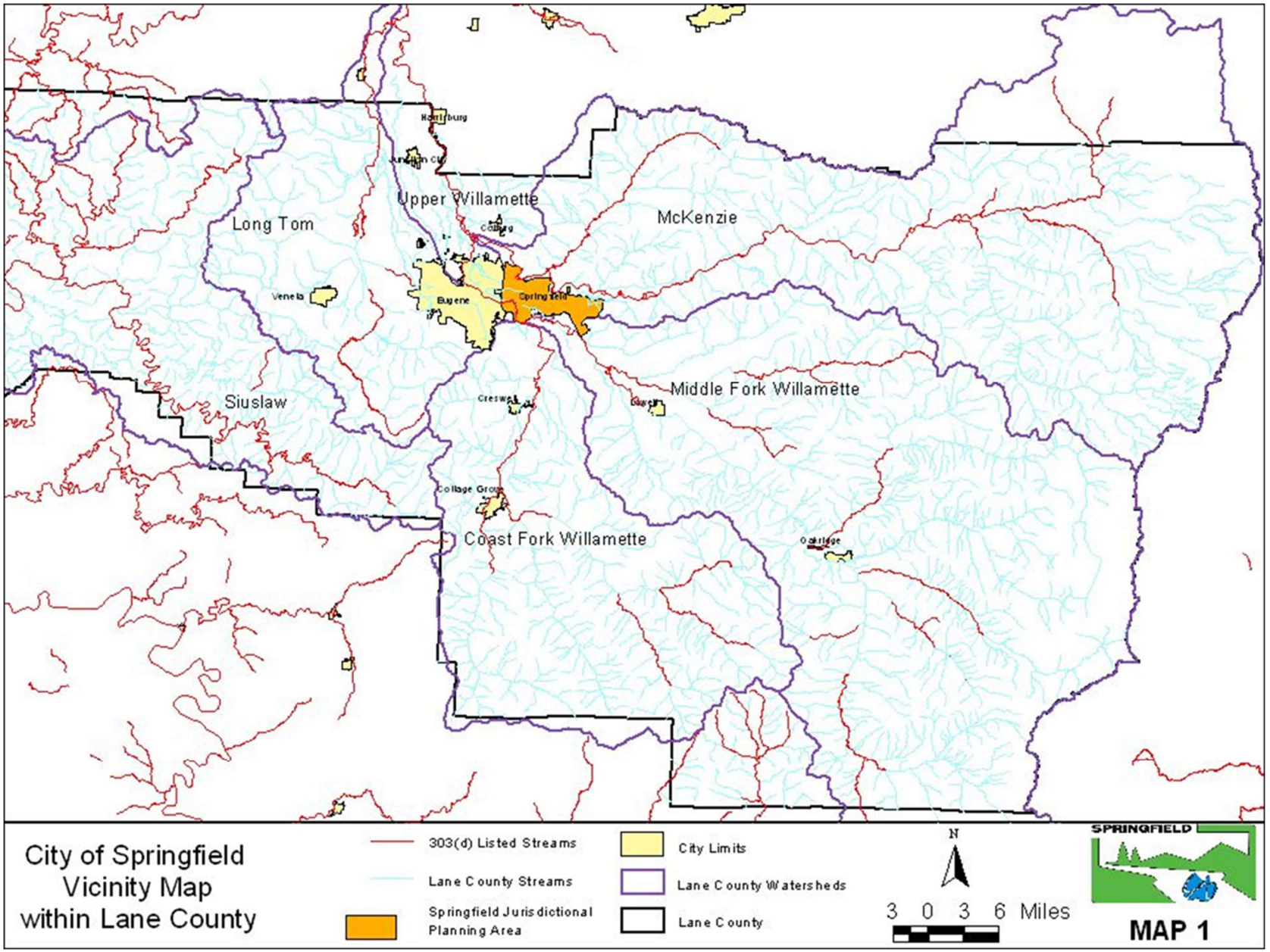
Drains to	# of Drainage Basins	Combined Area, in acres
McKenzie River	5	8,651
Willamette River	8	6,417
Eugene, then Willamette	2	4,294

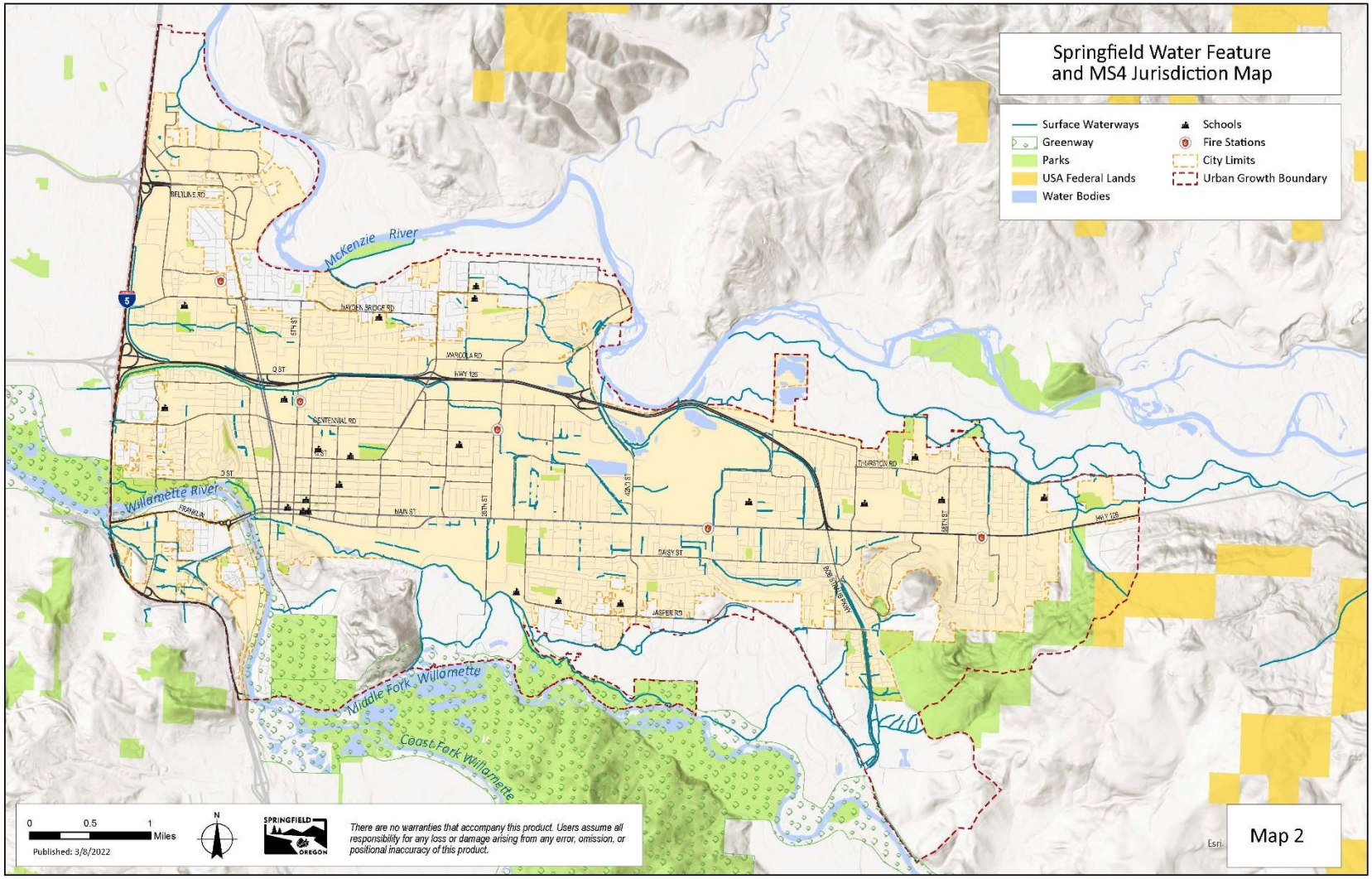
Source: City of Springfield

Map 2 shows public lands and water-related features within and near the City of Springfield. This map also shows the City Limits and the urban transition zone (area between City Limits and UGB). It is included to help show where public ownership adjacent to waterways exists.

For the current map of the stormwater system and waterways, visit: https://sporgis.maps.arcgis.com/apps/webappviewer/index.html?id=1446c0a1fe0a4abdacb5fa2157b6dd70

Springfield's Stormwater Facilities Master Plan (2008) includes detailed information about the drainage system: https://www.springfield-or.gov/wp-content/uploads/2016/12/StormwaterFacilityMasterPlan.pdf


Upper Willamette
Long Tom
McKenzie
Middle Fork Willamette
Siuslaw
Coast Fork Willamette
Eugene
Springfield
Veneta
Cottage Grove
Oakridge
City of Springfield
Vicinity Map
within Lane County
303(d) Listed Streams
Lane County Streams
Springfield Jurisdictional
Planning Area
City Limits
Lane County Watersheds
Lane County
N
3 0 3 6 Miles
SPRINGFIELD
MAP 1


Springfield Water Feature
and MS4 Jurisdiction Map
Surface Waterways
Greenway
Parks
USA Federal Lands
Water Bodies
Schools
Fire Stations
City Limits
Urban Growth Boundary
McKenzie River
Willamette River
Middle Fork Willamette
Coast Fork Willamette
BELTLINE RD
HAYDEN BRIDGE RD
MARCOLA RD
HWY 126
CENTENNIAL RD
MAIN ST
DAISY ST
JASPER RD
THURSTON RD
52ND ST
42ND ST
28TH ST
0 0.5 1 Miles
Published: 3/8/2022
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SPRINGFIELD OREGON
There are no warranties that accompany this product. Users assume all responsibility for any loss or damage arising from any error, omission, or positional inaccuracy of this product.
Esri
Map 2

2.2 Water Quality Permits & Programs

MS4 Permit & Plan

Several water quality related programs are already in place in Springfield and have direct application to managing TMDL pollutants. Primary among them is Springfield's status as a Phase II city under the provisions of the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program. As such, the City has received an NPDES MS4 stormwater discharge permit, which authorizes the City to discharge stormwater to the Waters of the State and the U.S. under the condition that it reduces pollutants "to the maximum extent practicable." The City received its first MS4 permit in 2007. The City received its second MS4 permit, a general permit, on June 1, 2021 after modification (permit #84048).

The City developed a Stormwater Management Plan (SWMP) in 2004 (re-adopted in 2011) to meet the requirements of Springfield's first MS4 permit. In 2022, the City created an MS4 Plan, which outlines actions the City will take to implement and meet the requirements of the six control measures outlined in Springfield's general MS4 permit (issued in 2021). Many of the measures in the MS4 Plan directly or indirectly address temperature, bacteria, or mercury pollution. A brief discussion of the practices and example programs applicable to the control of TMDL pollutants is included below. For full details and current stormwater plans associated with Springfield's MS4 permit, visit springfieldstreams.org.

NPDES MS4 General Permit Control Measures

- Public Education and Outreach
    - Includes the development and delivery of outreach materials (handouts, utility bill inserts, signs, etc.) to various target audiences on an assortment of topics. Includes social media posts, website development, participating in outreach events, storm drain marking, mailings, outreach to targeted businesses, etc.
    - Existing programs that address TMDL pollutants: Canines for Clean Water, Septic Inventory & Outreach, Clean Water Gardens, Clean Water Biz, Public Education & Outreach Strategy, etc.
- Public Involvement and Participation
    - Includes public notice and providing opportunities for feedback, maintenance of a publicly accessible website, and offering stewardship opportunities.
    - Existing programs that address TMDL pollutants: Stream Team
- Illicit Discharge and Detection and Elimination (IDDE)
    - Includes an ordinance prohibiting illegal discharges to the stormwater system. Includes IDDE response, enforcement, and tracking. Includes updating City stormwater infrastructure mapping and dry weather screening of outfalls.
    - See Section 7 for municipal code sections.

    - Existing programs that address TMDL pollutants: IDDE, Dry Weather Screening
- Construction Site Runoff Control
    - Includes an ordinance regulating construction site runoff. Includes site plan review, erosion and sediment control permitting, and inspections and enforcement.
    - See Section 7 for municipal code sections.
    - Existing programs that address TMDL pollutants: Land and Drainage Alteration Permit (LDAP)
- Post-Construction Site Runoff for New Development and Redevelopment
    - Includes ordinance requiring retention and treatment of stormwater runoff, site plan review, and ensuring the long-term operation and maintenance of private stormwater facilities.
    - See Section 6 for development code sections.
    - Existing programs that address TMDL pollutants: Development Review, Water Quality Facility Management
- Pollution Prevention and Good Housekeeping for Municipal Operations
    - Includes maintaining public stormwater infrastructure, street sweeping, catch basin cleaning, and several pollution prevention guidance manuals.
    - Existing programs that address TMDL pollutants: Street Sweeping, Catch Basin and Storm Line Cleaning, Storm and Surface Water Maintenance Strategy, Pollution Control and Best Management Practices Manual, etc.

Wastewater Discharge Permit

The Metropolitan Wastewater Management Commission (MWMC) and the cities of Eugene and Springfield hold an NPDES permit (#102486) for the discharge of treated wastewater to the Willamette River from the Eugene-Springfield Water Pollution Control Facility. The MWMC also holds a permit for stormwater discharges from the wastewater treatment facility and related Biosolids Management Facility site. These facilities are located in Eugene and are described in Eugene's TMDL IP (June 2023).

Other Regulatory Programs

Safe Drinking Water Act

Springfield primarily utilizes wells for public water supply and has a Drinking Water Protection Plan (adopted 1999) and Overlay District which establishes wellhead protection zones, with protective measures implemented in these zones. See Section 6 for applicable Development Code sections.

State Land Use Planning Goals

Goal 5 requires riparian and wetland protection of identified areas within the City. Goal 6 requires air, water, and land discharges to not exceed the carrying capacity of resources or degrade or threaten the availability of such resources. Springfield has inventoried these natural resources and adopted ordinances to comply with State laws. See Section 6 for applicable Development Code sections.

Endangered Species Act
In Springfield, this protection is focused on anadromous salmonid species, but also includes Oregon Chub, Pacific Lamprey, Western Pond Turtles, and more.

NPDES 1200CA Permit (as needed)
This permit is obtained for construction and maintenance activities carried out by the City.

2.3 City of Springfield Organizational Structure

All City employees are responsible for pollution prevention and many implement specific MS4 permit and TMDL requirements. The City of Springfield is organized into multiple departments.

The Development & Public Works Department is the primary department responsible for providing stormwater and wastewater management services to Springfield. This department is divided into three divisions: Operations, Community Development, and Environmental Services. The Environmental Services Division oversees the City's TMDL IP and MS4 permit and plan. In addition, the Environmental Services Division oversees the industrial pretreatment program and administration of the regional wastewater treatment facility owned by the Metropolitan Wastewater Management Commission (a partnership amongst the City of Springfield, City of Eugene, and Lane County). The City of Eugene is responsible for the operation and maintenance of the regional wastewater treatment facility.

The Operations Division is responsible for providing street sweeping, catch basin cleaning, and overall maintenance of the stormwater and wastewater systems in Springfield. The Community Development Division is responsible for comprehensive planning, building permits, capital engineering, development review, and more. Within each division, there are multiple sections, many of which implement pieces of the City's TMDL IP (such as Geographic Information Systems (GIS), Construction Services, etc.).

Other Springfield Service Providers
Springfield Utility Board (SUB) provides drinking water and electric services to Springfield. Rainbow Water District provides drinking water to a smaller portion of Springfield.

Willamalane Park & Recreation District provides recreation services to Springfield and is responsible for the maintenance of their parks and open space.

2.4 Regional Partnerships

Springfield works cooperatively with various agencies and citizen groups to actively support appropriate management of natural resources and stormwater. Below are examples of some of Springfield's primary partnerships.

Intergovernmental Agreement (IGA) between the City of Springfield and Lane County
Lane County and City of Springfield maintain an IGA for NPDES Phase II services within the Urban Transition Zone (UTZ), which is the area between the City Limits and UGB. This IGA outlines each party's obligations for implementing education and outreach, public involvement, IDDE response, erosion and sediment regulations, and post-construction stormwater retention and treatment regulations within the UTZ.

Team Springfield
This is a partnership amongst the City of Springfield, Springfield Utility Board (SUB), Willamalane Park and Recreation District, and Springfield Public Schools to share ideas, resources, and deliver projects that benefit Springfield community members.

Groundwater Guardians
Through this group, the City of Springfield, SUB, Rainbow Water District, Springfield School District, DEQ, and other agencies and community members work together to protect the primary source of Springfield's drinking water – groundwater. Projects include installing signs, pesticide outreach, well water testing, water quality monitoring, and more.

Long Tom Watershed Council (LTWC) and Urban Waters & Wildlife Partnership (UWWP)
The City of Springfield and the LTWC partner to incentivize voluntary stormwater retrofits on private property. The UWWP is an extension of this program which is facilitated by the Upper Willamette Stewardship Network and includes the McKenzie Watershed Council, Lane County, City of Eugene, Eugene Water & Electric Board, SUB, and more.

Pollution Prevention Coalition (P2C)
Lane County and the cities of Eugene and Springfield, along with other agencies, work together to provide pollution prevention outreach and resources. Past projects include outreach for best practices for pressure washing, fish-friendly car wash kits, etc.

Clean Rivers Coalition
The City of Springfield is an active partner in the Clean Rivers Coalition, which is a statewide effort to promote best management practices to the public to protect water quality. Reducing the use of lawn care chemicals is one focus of the group.

Section 3 – Water Quality Assessment

3.1 Water Quality Limited 303(d) Listings

The Oregon Department of Environmental Quality (DEQ) sets water quality standards for waterways in the region to protect beneficial uses such as drinking, fishing, swimming, fish spawning, and irrigation. Streams, lakes, and rivers that do not meet these standards are included in a list of impaired waterbodies. This list, developed in response to Section 303(d) of the Clean Water Act, is referred to as the 303(d) list, and contains the names and descriptions of waterways, or sections of waterways that have been shown to not meet state water quality standards for any listed pollutants.

Both the McKenzie and Willamette rivers fail to meet Oregon State water quality standards for temperature. The Willamette also fails to meet water quality standards for bacteria, and through a complex analysis, has been listed as not meeting state standards for mercury. Springfield's public stormwater drainage system discharges to both of these waterways.

The DEQ is required to assess the water quality condition of Oregon's waters and report to the Environmental Protection Agency (EPA) every two years. DEQ then prepares an Integrated Report, which contains the list of waters identified under Section 303(d) as not meeting Oregon water quality standards. More about the Integrated Report can be found at: https://www.oregon.gov/deq/wq/pages/epaapprovedir.aspx

The table below identifies waterbodies within or near Springfield that may be affected by activities within Springfield's jurisdiction. Information within the table is from the 2022 Integrated Report.

Table 2 Waterbodies & Parameters Exceeding Water Quality Standards

Upper Willamette Subbasin Waterbody Name	HUC_10	Springfield Major Basin	Location Description	303(d) listed parameter, TMDL developed	303(d) listed parameter, TMDL needed but not yet developed
Cedar Creek	1709000407	North Cedar Creek Basin South Cedar Creek Basin	Cougar Creek to confluence with McKenzie River	Bacteria Temperature (year-round) (spawning)	
McKenzie River	1709000407	N/A	Ennis Creek to confluence with Willamette River	Bacteria Methylmercury Temperature (year-round) (spawning)	Dissolved oxygen (spawning) Alkalinity

Upper Willamette Subbasin Waterbody Name	HUC_10	Springfield Major Basin	Location Description	303(d) listed parameter, TMDL developed	303(d) listed parameter, TMDL needed but not yet developed
Mill Race	1709000110	Millrace Basin	Middle Fork Mainstem Willamette	Bacteria	Dissolved oxygen (spawning)
Middle Fork Willamette River	1709000110	N/A	Fall Creek to confluence with Willamette River	Bacteria Methylmercury Temperature (year-round) (spawning)	Dissolved oxygen (spawning)
Mainstem Willamette River	1709000306	N/A	Confluence of Middle and Coast Forks to Luckiamute River	Temperature (year-round) (spawning) Bacteria	Dissolved oxygen (spawning) BioCriteria Dioxin Iron (total) Chlordane Aquatic weeds

3.2 TMDL Pollutants & Potential Sources

Temperature, bacteria, and mercury are the parameters included in all of the Willamette Basin TMDLs. Although other parameters are included in sub-basin TMDLs, these three are major concerns throughout the entire Willamette Basin.

Brief summaries of these pollutants, as well as their sources and impacts, are included below. More in-depth information can be found in Chapters 2, 3, and 4 of the Willamette Basin TMDL (DEQ, 2006), Willamette Basin Water Quality Management Plan (WQMP), 2019 Final Revised Willamette Basin Mercury TMDL and WQMP, Willamette Basin Bacteria TMDL, and Temperature-Mainstem TMDL and Subbasin Summary.

Temperature

Sources

Removal or disturbance of streamside vegetation is a primary activity that negatively impacts stream temperature, since the loss of streambank shade cover allows direct sunlight on the water surface, and hence warmer water. However, water temperature is also affected by erosion, warming of urban runoff across unshaded impervious surfaces, channel modification and loss of channel complexity, and low stream flows caused by water extraction.

Other major sources of thermal pollution include industrial dischargers (such as the discharge of non-contact cooling water), wastewater treatment facilities, and dam and reservoir operations. In addition, unmitigated runoff from impervious surfaces tend to exhibit higher runoff temperatures.

Concerns
Warm water, when it outfalls to surface waterways, is considered a pollutant, since its effect on plant and animal life is similar to that of many chemical or organic pollutants. In the Willamette Basin, the temperature concern is that the surface waterways are too warm at certain times of year and pose a threat to fish species such as salmon, which require cold water habitats to complete their life cycle. Water warmer than certain established limits, which vary from season to season and stream reach to reach, is considered thermal pollution.

Bacteria
Sources
According to the Willamette Basin TMDL, point sources in the upper Willamette Basin cause less than a one percent increase in the bacteria concentrations over natural conditions (DEQ, 2006). Therefore, the focus of the TMDL implementation efforts is on non-point sources.

Bacteria violations of water quality standards are most common in creeks and streams that drain urban and agricultural land. The Mainstem Willamette River is water-quality impaired for bacteria during the high flows of the fall-winter-spring months but is in compliance during minimal summer flows when there is the least amount of stormwater runoff. This indicates that significant sources of bacteria likely originate and accumulate on land and are then carried into waterways through stormwater runoff.

The potential sources of bacteria in Springfield's waterways include:

- Stormwater runoff;
- Bacteria associated with sediments from erosion;
- Illicit cross connections between the stormwater and wastewater systems;
- Wastewater discharges, including sanitary sewer overflows, failing septic systems, and leaking pipes;
- Waste from wildlife and domestic pets;
- Waste from illegal camping; and
- Illegal dumping of sanitary wastes.

Concerns
People can be affected by bacteria in water during activities such as swimming, wading, boating, or fishing. Ingestion or contact with water contaminated with bacteria can cause skin and respiratory ailments, gastroenteritis, and other illnesses.

Mercury

Sources

According to the Willamette Basin Mercury TMDL (February 4, 2021), atmospheric deposition from global sources is the dominant source of mercury within the Willamette River Basin (Table 3). It is a common pollutant associated with the combustion of coal or petroleum. Once mercury is deposited on the landscape, the main pathway to streams is via surface runoff.

In Oregon, naturally occurring mercury is found in many local soils, and high concentrations exist in some areas. Land management practices can result in runoff or sediment erosion that can transport mercury to the stream network, including construction sites, forestry and agriculture, water impoundments and conveyances, non-permitted urban stormwater runoff, groundwater, and mines (Table 3).

Legacy mines located in the Coast Fork Willamette drainage basin are significant contributors of mercury pollution in the upper Willamette area (Table 3). Monitoring shows that mines are a significant source in the Cottage Grove Lake area, where they contribute 74% of the mercury contamination.

A few industrial sources discharge low levels of mercury in their wastewater effluent. It may be discharged from municipal wastewater treatment plants, where it originates from paint, rubber, and other sources, as well as small amounts from dental offices.

Table 3 Estimated Total Mercury Loads for Sources Categories

Source Category	Estimated Load of Total Mercury (g/day)	Relative Contribution to Total Load
Nonpoint Sources		
Surface runoff of atmospherically deposited mercury	118.0	32.7%
Resurfacing groundwater	60.6	16.8%
Direct deposition to open water	5.9	1.6%
Erosion of mercury containing soils	154.6	42.8%
Urban DMAs (without MS4 permits)	2.5	0.7%
Legacy mine discharges	4.0	1.1%
Point Sources		
Sewage treatment plant discharges	3.2	0.9%
Industrial discharges	1.2	0.3%
Permitted stormwater discharges	11.3	3.1%
Total Load	361.3	

Source: Final Revised Willamette Basin Mercury TMDL (November 22, 2019) Table 6-7

Concerns

Mercury is toxic in very small amounts and tends to accumulate in the tissues of animals that ingest or are otherwise exposed to it, effectively concentrating the exposure to animals or people ingesting the contaminated species. Once ingested, these toxins act on the nervous system, especially the brain, where they adversely impact IQ, language, and physical coordination skills. These effects are even more pronounced in fetal development and in children.

Section 4 – Implementation Strategies

This section presents implementation strategies, including details on how and when the strategies will be implemented. The goal is to ensure flexible, cost effective, and robust programs that include collaboration with citizens, regional partners, and local businesses. See Appendix A for the implementation matrix.

4.1 Temperature Reduction Strategies

Springfield's temperature management strategy is to protect streamside vegetation, plant trees, and provide education and outreach to the public and targeted businesses and industries. Maintaining riparian vegetation is believed to be the most effective way to minimize thermal pollution. This is accomplished by protecting and re-establishing vegetation along waterways to provide shade cover. Temperature benefits also can be realized through stream restoration projects including stabilizing streambanks, increasing stream flows, decreasing channel width, and restoring channel complexity. Specific strategies are described below.

Strategy T1 – Potential Shade & Natural Resource Area Enhancement Planning

Task 1 - "Plan, design, and track riparian/channel enhancement capital projects."

During the first five-year cycle, Springfield staff reviewed maps and aerial photos of the City as well as past waterway inventories and assessments and identified sites with the potential for developing shading projects. The list also included systems that could benefit from in-channel and/or riparian enhancement work. This list was then reviewed and prioritized to facilitate developing and implementing projects. In the fourth Plan cycle, staff will continue to utilize the existing priority list of riparian segments for shading (Canopy Shade Assessment) to help prioritize waterway Capital Improvement Program (CIP) projects. Engineering and project management staff time are needed to plan for and design waterway shading and enhancement projects.

From 2005-2014, the City, with support from the US Army Corps of Engineers (USACE), completed a multi-phased Mill Race Aquatic Ecosystem Restoration Project. As part of its cooperation agreement with the USACE, the City was obligated to ensure that clean water enters the restored Mill Race from local drainage. To fully comply with the Clean Water Act, Endangered Species Act, and Safe Drinking Water Act, the City took responsibility for improvements to and protection of the entire Mill Race system, the lower reach of which has been recognized as a 'transportation corridor for fish and wildlife.' Thus, riparian habitat, water quality, and drainage improvements have long been anticipated for all publicly-owned properties adjacent to the entire Mill Race.

In 2008, the City Council adopted a Stormwater Facilities Master Plan (Master Plan) to guide more comprehensive, efficient, and multi-objective management of Springfield's stormwater system. Given Springfield's ongoing efforts to restore the Mill Race's aquatic ecosystem, the waterway was identified in the Master Plan as a priority project area for water quality improvements. While the focus of the water quality improvements

identified in Master Plan was to eliminate discharges of stormwater to the Mill Race that do not meet water quality standards, the Master Plan anticipated that the water quality objectives would ultimately be achieved through several interrelated capital projects that together would manage stormwater on and through land adjacent to the Mill Race so that: no new constructed outfalls to the Mill Race are required; erosion and sediment movement is prevented; and the rate of surface runoff to the Mill Race is minimized.

In 2017, the Mill Race Stormwater Facility, including wet pond, vegetated drainage swale, trailhead, and multi-use path, opened to the public. The Lower Mill Race capital project is the last piece of the comprehensive Mill Race work. A Planning Study for this area is needed and will include existing conditions analysis, concept development, and schematic design.

During the fourth Plan cycle staff will continue to plan for Lower Mill Race stormwater and restoration projects. Currently, the City and public partner agencies own some but not all of the Lower Mill Race. Property acquisition or easements are needed prior to project implementation.

Measurable Goals

- Track data for completed waterway enhancement CIP projects such as length of riparian area restored and number of trees and shrubs planted (ongoing).
- Explore options to dedicate staff time to waterway enhancement and project delivery within the CIP program by March 2029.
- Continue Lower Mill Race stormwater and restoration project planning by April 2027, with a Planning Study drafted by March 2029.
- Work with private landowners to acquire property or easements along the Lower Mill Race, where feasible, by March 2029.

Task 2 - "Modernize and maintain Goal 5 natural resource area mapping."

For decades, Springfield has had inventories for natural resources such as wetlands, riparian areas, and local Water Quality Limited Watercourses. The City followed Oregon Statewide Planning Goal 5 in its development of these inventories and has since assigned local protections to many of the inventoried natural resources. In the third Plan cycle, the City completed a Local Wetlands Inventory and Riparian Resource Area and Wildlife Habitat Assessment in Springfield's newly expanded Urban Growth Boundary (UGB) areas. The City plans to add these Goal 5 natural resources to its adopted maps and formally adopt protections for them in the fourth Plan cycle.

Goal 5 mapping is an essential tool for City planning staff and the public for determining required wetland delineations, development setbacks, and other natural resource protections. As such, the City will also develop improved map tools, including an interactive web application. The clearer mapping and additional data provided via these improvements are intended to enhance the accuracy of Springfield's natural resource protection programs and make the property research process easier and more convenient.

Measurable Goal

- Update Goal 5 natural resource inventory mapping by March 2027.

Strategy T2 – Riparian Area, Parking Lot & Streetscape Shade Protection & Enhancement

Task 1 - **"**Take protections for Goal 5 natural resources inventoried in Springfield's UGB expansion areas to City Council for adoption. Clarify Springfield Development Code Goal 5 protections and update adopted land use plans for new protections, as needed."

Springfield worked from 2019 to 2024 to complete Goal 5 inventories for wetlands, riparian areas, and wildlife habitat in its UGB expansion areas, while also verifying the accuracy of its mapped Water Quality Limited Watercourses. While many of the water-based resources are currently mapped in these areas, formal adoption of the updated map (Task 2, above) for protections is anticipated during this fourth Plan cycle.

Springfield's Development Code currently includes setbacks for locally protected wetlands and waterways along with requirements for street trees and parking lot canopy trees. Staff has identified the need to clarify some existing Springfield Development Code language about the applicability of the protections and may update protections for specific resources pending further evaluation, which may translate to additional updates to the Development Code, Comprehensive Plan, and/or Metro Plan.

Measurable Goals

- Take protections for significant Goal 5 natural resources areas inventoried in the UGB expansion areas to City Council for public hearing by January 2028.
- Clarify Development Code Goal 5 protections and take to City Council for public hearing by January 2028.

Task 2 - "Inventory and maintain public trees, review tree-related requirements in the Springfield Development Code, and explore application for Tree City USA recognition."

Springfield's Operations Division maintains public trees and is currently working to complete a tree inventory. Springfield budgets for tree-related expenditures annually.

Springfield's Development Code regulates retention of natural vegetation, wildlife habitat, riparian areas, scenic quality, and cultural amenities. Springfield Development Code 4.2.140 *Street Trees* requires trees within the public right-of-way for new developments, as well as standards for tree retention and replacement. Springfield Development Code 5.19.100 *Tree Felling Permit* requires permitting for tree removal and conditions for replacement on private property.

An additional driver of tree preservation is the City's efforts to achieve Goal 5 protection for significant wildlife habitat in its UGB expansion areas through a balanced evaluation of the economic, social, and environmental and energy consequences for the TMDL

period. Increased collaboration around tree inventory, preservation, and planting amongst the City of Springfield, Willamalane Park & Recreation District, and Springfield Utility Board is planned.

While Springfield has several of the requirements for Tree City USA recognition completed, the establishment of a tree committee or department is needed prior to Springfield's application for Tree City USA.

Measurable Goals

- Work to complete an inventory of public trees by January 2026.
- Continue to maintain public trees. Document maintenance activities and number of street trees planted by Operations annually.
- Continue to budget for tree-related expenditures (ongoing).
- Review existing ordinances for public and private trees and identify revisions by January 2026. If code amendments are needed, take to City Council for public hearing by January 2029.
- Explore creating a tree committee or department by January 2029.
- Explore application for Tree City USA by January 2029.

Task 3 - "Waterway maintenance and restoration."

The City owns and maintains many waterways (or segments of waterways) throughout Springfield. City Operations staff work to remove invasive plants, maintain flow, and plant native vegetation along these waterways as time and funding allows. Springfield completed a *Storm and Surface Water Maintenance Strategy* in the third plan cycle; however, this document focuses on flow and not vegetation management in riparian areas. Because these tasks are seasonal in nature, the development of a waterway maintenance plan is needed. City Operations and Water Resources, along with partner agency Willamalane Park & Recreation District, will work together during this fourth plan cycle to develop a waterway maintenance plan.

Operations currently utilizes mapping software to document maintenance activities but improvements are needed to better document invasive plant removal and native plantings by area or linear feet and/or the number of trees/shrubs planted. Additional staff time is needed to develop a waterway maintenance plan and to perform these activities.

The City identified restoration of the Springfield Mill Race as a priority project to enhance fish passage, reduce water temperature, improve water quality and flows, and re-establish native habitat. The USACE also participated in this project. The restoration project with the USACE was completed in March 2012. The final results include a new channel entrance, dam removal, invasive species removal, re-vegetation with native trees and shrubs, and constructed wetlands. The City had an agreement with the ACOE to maintain the functions and values of the restoration project for a period of five years. The restoration and management activities took place during the first and second TMDL IP cycles. Ongoing operation and maintenance will continue into the fourth Plan cycle.

City staff work with partner agencies such as Willamalane Park & Recreation District to plan and implement public opportunities for invasive plant removal, native vegetation planting, and litter pick up within riparian corridors in Springfield. Staff will continue to create (or partner with another agency) to provide stewardship opportunities for the public in the fourth Plan cycle.

Measurable Goals

- Improve mechanisms for tracking the area of invasive plants removed and native trees and shrubs planted by March 2026.
- Continue to maintain City-owned waterways (including the Mill Race) by removing invasive plants, maintaining flows, and planting native trees and shrubs (ongoing).
- Draft a waterway maintenance plan by January 2029.
- Explore funding options for adding staff dedicated to waterway maintenance by March 2029.
- Implement one public stewardship opportunity by March 2029.

Strategy T3 – Industrial Warm Water Discharges

Task 1 - "Map NPDES industrial stormwater permit holder sites within Springfield's City Limits. Review and provide comments to DEQ on industrial stormwater permits in Springfield when they are available for public review."

Springfield currently maps NPDES industrial stormwater permit holders within Springfield's City Limits. Of these, there are several industrial point sources that discharge non-contact cooling water into the City's stormwater system. These sites are managed by the Oregon DEQ's NPDES permit program. Springfield staff will continue to review and provide comments to the DEQ when a facility's permit, within Springfield City Limits, is issued or renewed.

Measurable Goals

- Review and update the map of current industrial stormwater dischargers within Springfield's City Limits by July 2025 and again by July 2027.
- Provide comments to DEQ during public review of industrial permits when they are issued or renewed (ongoing).

Strategy T4 – Public Outreach and Education

Task 1 - *"*Continue to develop and distribute outreach and education materials to businesses and the general public as needed."

The City has a website with water quality information, pollution prevention tips, and educational fact sheets addressing temperature. Outreach materials continue to be provided at public events.

Currently, ESD staff has assessed various activities that involve warm water discharges and has developed a variety of educational materials addressing temperature. Springfield is an active member in multiple local, regional, and State education and outreach groups and will continue to participate in outreach campaigns that aim to reduce thermal pollution. The most common non-industrial warm water discharges (washing activities) are being addressed as well as promoting riparian restoration and streamside planting with native trees and shrubs to provide shade.

Measurable Goals

- Maintain website with annual updates of TMDL information and public outreach materials that focus on ways to reduce temperature (such as planting native plants and trees) and preventing warm water from entering the stormwater system (annual).
- Continue to develop and distribute outreach materials to businesses and to the general public (ongoing).

4.2 Bacteria Reduction Strategies

Springfield's bacteria reduction strategies focus on preventing human waste from entering waterways, proper pet waste management, and education and outreach. Specific strategies are described below.

Strategy B1 – Sanitary Sewer Overflows – City Work Practices

Task 1 - "Continue to implement current City standard operating procedures for sanitary spill response. Amend or revise if appropriate to ensure rapid and effective response."

Springfield reviewed and updated the written Standard Operating Procedures and Practices (SOPPs) for addressing sanitary sewer spills, overflows, and repair of damaged sanitary sewer pipes within the third Plan cycle to ensure that responses are timely, procedures are appropriate, and that they comply with current regulations. Springfield staff will continue to implement the existing SOPPs and update as needed.

Measurable Goal

- Implement SOPPs for sanitary spill response and update as needed (ongoing).

Strategy B2 – Animal/Pet Waste Program Enhancement

Task 1 - "Coordinate with local partners to identify locations for additional pet waste disposal stations in public areas and assist with maintenance. Maintain City-managed pet waste stations."

Springfield presently coordinates with the Willamalane Park & Recreation District and Springfield School District to maintain pet waste disposal stations throughout the City. While Willamalane and the Springfield School District are responsible for maintaining pet waste stations on their property, the City provides bags and pet waste stations to

both agencies per their request. The City will continue to work cooperatively with local partners such as Willamalane Park & Recreation District, Springfield School District, and City Operations to identify additional sites and, if appropriate, facilitate the installation and service of these stations.

The City also maintains stations on City-owned properties and rights-of-way. City staff has mapped the locations of these stations and maintains a pet waste station inventory.

Measurable Goals

- Continue to collaborate with local partners to identify additional prospective pet waste station sites by March 2025 and again by March 2027.
- Continue to assist local partners with the maintenance of new and existing stations/sites by August 2025 and by August 2027.
- Maintain City-managed pet waste stations (ongoing).
- Continue to maintain an inventory of station locations (ongoing).

Task 2 - "Continue to identify pet care providers and services in Springfield and provide outreach."

Springfield staff identified best management practices for pet parks, kennels, vets, and pet day care facilities to ensure proper waste management during the first Plan cycle. During the first and second Plan cycles, staff worked with facility owners to coordinate educational material distribution and provided facilities with technical assistance on proper waste management. Staff will review and update the list of pet supply stores and service providers within the UGB and will continue to work with facility owners on proper pet waste management as requested. During the second Plan cycle, Water Resources staff re-developed the *Clean Water Biz* program that offers pet care providers an opportunity to participate. Staff will continue to offer the opportunity to pet care providers and adaptively manage the program based on participation.

Measurable Goals

- Continue to identify new pet supply, service, and care facilities within the UGB. Review and update the list of pet supply, service, and care facilities annually.
- Continue to coordinate with pet businesses on educational material distribution and track the location and materials distributed (ongoing).
- Continue to offer and provide technical assistance about pet waste management to pet businesses. Reach out to owners/operators at least twice during the Plan cycle by April 2025 and again by April 2027 and track facility participation.

Task 3 - "Continue pet waste outreach and education at public events and distribute outreach materials."

Proper management of pet waste is a priority of Springfield's existing stormwater management outreach and education programs. Springfield has an existing ordinance (SMC 5.422) prohibiting the deposit of dog and horse waste on improved property other than that of the animal's owner. Staff will continue to encourage proper pet waste

management through activities such as outreach at public events, handouts, website material, social media, calendar contests, and citizen contact. Currently, the City implements a popular *Canines for Clean Water* program that distributes brochures at local pet supply stores and holds “pick up after your pet” pledge events.

Measurable Goals

- Update outreach materials as needed and maintain website annually.
- Hold one *Canines for Clean Water* pledge event each fiscal year.

Task 4 - “Discourage wildlife feeding through outreach and education.”

Recreational feeding of waterfowl and other wildlife along waterways results in concentrations of wildlife that far exceed the natural carrying capacity of the local waterways. This results in degraded stream banks, erosion, and high levels of fecal contamination. Identifying popular wildlife feeding areas and focusing education and outreach efforts to community members through educational signs and handouts helps discourage feeding, allows wildlife populations to disperse, and promotes the recovery of riparian areas and water quality.

Staff will continue to coordinate with Willamalane Park & Recreation District and the City’s Operations Division to identify locations, post signs, and distribute educational materials. Sign installation is mapped and educational material (door hangers, signs, etc.) distribution is tracked.

Measurable Goals

- Continue to coordinate with partners such as Willamalane Park & Recreation District and City Operations staff to identify locations where wildlife feeding is concentrated and, where appropriate, post signage. Reach out to partners and staff by March 2025 and March 2027.
- Continue to track educational material distribution and update sign inventory on an ongoing basis.

Strategy B3 – Septic System Inventory & Outreach, Private Sanitary Outreach, & Transient Camping

Task 1 - “Maintain a septic system inventory within the City Limits. Review, update, and deliver outreach and educational materials to septic owners. Continue to extend municipal sanitary sewer services as appropriate.”

Springfield has a small number of properties within the City Limits using private septic systems; however, permitting authority for these systems lies within Lane County’s jurisdiction. Some properties have a public sanitary sewer system available but have not connected for various reasons. Currently, there is no mandatory connection to the public sanitary sewer for existing and properly functioning septic systems. However, where private septic systems are found failing, connection to the municipal sanitary system may be required.

Extension of the public sanitary sewer system typically occurs incrementally as land within the Springfield City Limits develops with urban uses. The City's Capital Improvement Program (CIP) extends major trunk lines for the municipal sanitary sewer system to areas of Springfield that do not currently have these services. Springfield is currently in the process of updating its Wastewater Master Plan, which identifies projects for system expansion and rehabilitation.

Staff will continue to identify and map existing septic systems within the City Limits and provide property owners with educational materials. Staff will work cooperatively with owners and encourage them to connect to the public sanitary system where appropriate and/or required.

Measurable Goals

- Continue to maintain a septic system inventory within the City Limits; ongoing process throughout the five-year cycle (annual).
- Review, update as needed, and deliver outreach and education materials to private septic system owners twice during the five-year cycle by April 2025 and by April 2028.
- Continue to extend public sanitary services where feasible; ongoing throughout the five-year cycle.

Task 2 - "Continue to provide outreach and technical assistance to businesses to improve sanitary waste disposal practices."

Springfield currently operates an Illicit Discharge Detection and Elimination (IDDE) program to detect and eliminate illegal discharges to the storm drainage system. Program staff actively responds to reports of illicit discharges as well as other water quality related complaints and works to mitigate the discharge in a timely manner. The IDDE program is guided by the City's MS4 permit and Stormwater Management Plan and has protocols in place for responding to and enforcement of illicit discharges, spills, or dumping into a waterway or storm system within Springfield's UGB. The IDDE program has an active outreach component that targets commercial and industrial sites that may have the potential to pollute stormwater. Springfield's IDDE program has identified waste-generating activities that have the potential to discharge bacteria and/or polluted washwater; this strategy is part of that larger targeted effort. Some examples of past education and outreach efforts that have specifically focused on sanitary waste disposal practices by commercial businesses include mobile carpet cleaners, RV waste disposal, and pressure washing.

Springfield will continue a targeted outreach/education campaign to address private waste-generating businesses and activities to ensure proper disposal of sanitary commercial wastes and washwater.

Measurable Goal

- Continue to identify private waste-generating businesses and activities. Develop and distribute outreach materials (as needed) which include best management

practices, relevant regulatory requirements, and lists of resources for additional information. Two efforts will be made during this fourth Plan cycle by April 2025 and again by April 2028.

Task 3 - "Continue to remove litter and clean up transient camps along City-managed waterways."

Transient camps may pollute waterways with sanitary and other wastes. Springfield presently addresses illegal camping; however, limited resources do not always provide for the removal and cleanup of all camps. Since camps near waterways present the most pressing water quality hazard, Springfield focuses on eliminating camps in these priority areas.

Springfield will continue working towards a goal of eliminating and cleaning up transient campsites along or near waterways. Camps will be removed, and the sites cleaned of refuse and sanitary wastes, to the extent possible within existing resource constraints. During the first and second Plan cycles, staff developed notification procedures, priority site criteria, assessed known sites, implemented cleanup efforts, and worked with regional partners to reduce illegal camping along waterways and wetlands.

Measurable Goal

- Clean up litter and transient camps along waterways managed by the City and track the number of illegal campsites cleaned up and the pounds of material removed (annual).

4.3 Mercury Reduction Strategies

Springfield's management strategy focuses on preventing sediment from entering waterways, storm system maintenance, requiring and maintaining post-construction stormwater controls, and hazardous waste control through education and outreach.

Strategy M1 – Limit Construction Site Erosion

Task 1 - "Continue to implement and adaptively manage the existing Land and Drainage Alteration Permit (LDAP) construction site erosion control program."

Springfield's LDAP program is a DEQ approved and effective construction site erosion control program based on permitting, inspections, and outreach to contractors and developers. Staff updated the LDAP municipal codes in 2023-2024. LDAP fact sheets were updated in the third Plan cycle and will be posted to the website with hard copies available at the permit counter. The LDAP program manual will be updated in the fourth Plan cycle. Springfield staff will continue to assess the program to identify limitations and to enhance program effectiveness.

Measurable Goals

- Track the number of LDAP permits issued, inspections conducted, and enforcement actions within the City Limits and the Urban Transition Zone (annual).
- Distribute LDAP fact sheets annually and conduct outreach to construction site operators by April 2026.
- Update LDAP program manual to reflect current municipal codes, processes, and documents by April 2026.
- Conduct a review of the LDAP program to determine if revisions, enhancements, or modifications are needed. Complete review by April 2026 and, if needed, take applicable code sections to Council for re-adoption by July 2028.
- Refer construction activity within Springfield's jurisdiction that requires 1200C permits to the Oregon DEQ (ongoing).

Strategy M2 – Enhance Post Construction Support

Task 1 - "Continue Water Resources staff participation in the City's development plan review process."

Water Resources water quality professionals currently assist with the review of development proposals for compliance with stormwater development standards and to help identify potential water quality impacts related to new development design. Staff will continue to participate in development plan review in this fourth Plan cycle.

Measurable Goal

- Water Resources staff will continue to review and provide comments for development plans that include water quality or Low Impact Development (LID) features. Track the number of development applications reviewed (ongoing).

Task 2 - "Continue to implement a post-construction mapping and inspection program to ensure maintenance of water quality facilities at private development sites."

New private development projects are currently inspected during construction and upon completion. Springfield's Development Code requires maintenance agreements for private stormwater facilities at new development sites.

Springfield implemented a Water Quality Facility Management Program during the first three Plan cycles. Staff will continue to map private stormwater facilities and conduct inspections of these facilities to ensure long-term functionality, within existing resource limitations.

Measurable Goals

- Ensure long-term functionality of private stormwater facilities through the continued use of maintenance agreements (ongoing).
- Map private water quality facilities and document the number of facilities mapped (ongoing).

- Inspect private water quality facilities and document number of inspections (ongoing).
- Continue program implementation within resource limitations. Review the Water Quality Facility Management program, adaptively manage, and update as needed by April 2026.

Task 3 - "Continue to implement a post-construction mapping, inspection, and maintenance program to ensure long-term functionality of public water quality facilities."

The City currently manages approximately 58 sites that contain a variety of water quality facilities – rain gardens, ponds, planters, and structural facilities like hydrodynamic separators. New public facilities are mapped after acceptance by City Council. Operation and Maintenance Plans have been created for each type of facility at each site.

City Operations performs regular inspections and maintenance of these facilities according to Springfield's *Storm and Surface Water Maintenance Strategy* (completed under the third Plan cycle) and operation and maintenance plans.

Measurable Goals

- Map public water quality facilities and document the number of facilities mapped (ongoing).
- Inspect and maintain City-managed water quality facilities and document inspections and maintenance (ongoing).
- Update public facility operation and maintenance plans by June 2028.
- Create operation and maintenance plans for new facilities (ongoing).

Strategy M3 – Street Sweeping, Catch Basin & Pipe Cleaning Programs

Task 1 - "Continue implementation of the current programs for street sweeping and catch basin and storm drainage pipe cleaning. Adaptively manage program practices and standards to enhance maintenance, as needed."

In 2023, Springfield created a *Storm and Surface Water Maintenance Strategy* that details catch basin and storm pipe cleaning and street sweeping goals and metrics. Springfield currently has three sweepers, including one air vacuum sweeper. Springfield regularly sweeps public arterials, collector, and residential streets.

Springfield aims to inspect/clean approximately 2,000 catch basins and 5,000 feet of storm line annually. Springfield tracks catch basin cleaning, linear feet of storm line cleaned, and curb miles swept.

Measurable Goals

- Continue implementation of routine street sweeping and storm system cleaning programs to reduce pollutants in the public right-of-way and drainage systems (annual). Track curb miles swept and linear feet of pipes cleaned (annual).

- Strive to inspect/clean at least 10% of City owned catch basins/inlets per year (annual).

Strategy M4 – Hazardous Waste Control

Task 1 - "Promote public household waste collection events to encourage proper disposal of items containing mercury."

Springfield along with other local agencies and solid waste handlers sponsor periodic household waste collection events, such as the Spring Clean Up, throughout the year. Springfield will continue to be an active partner in promoting and sponsoring events as well as researching other proper disposal options.

Measurable Goal

- Springfield will continue to participate in and support public events involving proper household hazardous waste disposal and recycling such as Spring Clean Up and home and garden shows. Ongoing throughout the five-year cycle.

Strategy M5 – Public Outreach & Education

Task 1 - "Continue to develop and distribute outreach and education materials to the general public, as needed."

ESD staff provides information on the proper disposal of some household objects that contain mercury. The most common sources addressed are electronics, thermometers, and florescent lights. Mercury switches in thermostats and inside automobiles are also contributors, as these items are typically destroyed in junkyards, resulting in a mercury release.

Outreach continues to be provided to the public at events such as Spring Clean Up and home shows. Educational materials promoting the proper disposal and recycling of mercury containing materials are available on the City's website.

Measurable Goal

- Update outreach materials as needed and distribute to the general public (ongoing). Track material distribution (ongoing).

Mercury Reduction Strategies – MS4 General Permit Six Control Measures
According to the Willamette Basin Mercury Total Maximum Daily Load (revised February 2021), MS4 permit holders have a goal of 75% reduction in total mercury. In 2022, Springfield updated its 2019 TMDL IP to include its MS4 Plan strategies that address mercury and other pollutants. Below are the strategies that are outlined in the City's 2022 MS4 Plan. It is expected that these strategies will continue into the fourth TMDL plan cycle.

Springfield's MS4 permit expires on February 28, 2024. Springfield applied for the renewal of the MS4 permit in 2023 and is expecting renewal in 2024.

Strategy MS4 - #1 Public Education and Outreach

Task 1 - Public Education and Outreach Strategy (PEOS)
During the third Plan cycle, Springfield completed a *Public Education and Outreach Strategy* (PEOS) to help guide ongoing education and outreach programs and project implementation. The Springfield City Council and Planning Commission are informed through periodic communication of program requirements. Springfield will continue to implement the PEOS, update Council and the Planning Commission, and provide education and outreach programs within the urban transition zone (UTZ) to fulfill the commitments within the Intergovernmental Agreement (IGA) with Lane County.

Task 2 - Public Education and Outreach on Pollution Prevention and Stormwater Impacts
Springfield will continue to develop, review, and distribute educational messages to each target audience on the target topics identified within the City's MS4 permit. Springfield will continue to track education and outreach to each target audience. This includes an Activity Assessment which is provided to the DEQ via the annual report each year, and an annual program review.

Strategy MS4 - #2 Public Involvement and Participation

Task 1 - PI1 - Public Involvement/Participation Access
Provides for implementation of public involvement and participation process by complying with state and local public notice requirements. Continues to provide opportunities for public input on stormwater programs in various forms, such as surveys, website postings, and/or public events. Provides for the continued review and enhancements to website postings and stormwater program information.

Task 2 - PI2 - Public Involvement/Participation Stewardship/Reporting
Springfield will continue working with local agencies to provide stewardship and educational opportunities. Projects are directed at raising awareness of local waterways and their associated habitat value. Other tasks include partnering with other regional groups and businesses to restore local waterways and improve stormwater facilities. Provides for continued program tracking, reporting, and assessment of progress.

Strategy MS4 - #3 Illicit Discharge Detection and Elimination

Task 1 - ID1 - Illicit Discharge Ordinance, Response, Enforcement, and Tracking
Provides for continued response, enforcement, and tracking of illicit discharges and complaints. An annual IDDE program review is completed to ensure permit requirements for response and enforcement are met. A summary of IDDE information is submitted with each annual report.

Springfield's IDDE ordinance was updated during the third Plan cycle in 2022 and enforcement will continue into the fourth Plan cycle (see Section 7 for ordinance). Springfield will continue to implement the current IDDE enforcement procedures and matrix.

Task 2 - ID2 - MS4 Map

MS4 infrastructure mapping updates are ongoing as new development and redevelopment occurs within Springfield's jurisdiction. The City's GIS workgroup updates infrastructure mapping when as-built and field information is submitted to them by staff, and as water quality facilities are constructed.

MS4 outfalls and priority points for dry-weather screening were identified during the third Plan cycle. Storm basin updates were made during the third Plan cycle.

Task 3 - ID3 - Dry Weather Screening Program

A dry weather screening program was developed during the third Plan cycle that included a pollutant parameter action level list, identification of priority field screening locations, and annual field screening of a portion of these locations. Additionally, a training strategy was developed during the third Plan cycle to ensure persons involved in IDDE program implementation are trained. The dry weather screening program will continue into the fourth Plan cycle.

Task 4 - ID4 - Non-Stormwater Discharge Assessment

The allowable non-stormwater discharges listed in the MS4 Modified General Permit Schedule A.1.d were evaluated during the third Plan cycle and the *Non-Stormwater Discharge Assessment* document was updated. In addition, the *Non-Stormwater Discharge Product Assessment* was also updated during the third Plan cycle. Springfield will continue to implement the best management practices within these documents and update them as needed in the fourth Plan cycle.

Strategy MS4 - #4 Construction Site Stormwater Runoff Control

Task 1 - CSW1 - Erosion and Sediment Control Regulations

A review of existing codes, procedural manuals, and ordinances was completed in the third Plan cycle. The City's Municipal Code was updated in 2024 (see Section 7 for details). The 2024 code will continue to be implemented during the fourth Plan cycle and updated if required by the MS4 permit. Referrals to DEQ will continue.

Task 2 - CSW2 - Land Drainage Alteration Permit (LDAP) Program

Ongoing program implementation will continue, including standards for site plan submittal, review, and approval.

Task 3 - CSW3 - Inspection and Enforcement

Implementation of the LDAP program will continue, including tracking violations and compliance for construction-related activities. Inspections of construction sites will

continue and a review and update of the enforcement matrix will be completed, if needed.

Task 4 - CSW4 - City Staff Erosion Control Training
Training of staff dedicated to the LDAP program will continue in the fourth Plan cycle. Increased outreach and education to construction site operators (part of PE2 - Public Education and Outreach on Pollution Prevention and Stormwater) will continue in the fourth Plan cycle.

Strategy MS4 - #5 Post-Construction Stormwater Management for New Development and Redevelopment

Task 1 - DS1 - Post Construction Stormwater Management Codes and Standards
Implementation of Development Code and design manual requirements relating to post-construction will continue into the fourth Plan cycle. Springfield's Development Code and design manual were updated in 2023-2024 to meet the requirements of the MS4 General Permit. Codes and standards will be updated, if required, to ensure compliance with the MS4 permit. Continued implementation includes site plan review for the retention and treatment of stormwater.

Task 2 - DS2 - Post Construction Stormwater Facility Long-Term Operation and Maintenance
Implementation of the Water Quality Facility Management Program will continue in the fourth Plan cycle. Inventory and mapping of public and private stormwater facilities, inspections, education and technical assistance to property owners, and enforcement activities (when needed to remediate substandard conditions) will continue during the fourth Plan cycle. Staff will continue to obtain and enforce operation and maintenance agreements for private water quality facilities.

Task 3 - DS3 - Post Construction Stormwater Management Training, Tracking, and Assessment
Springfield will continue to ensure that staff responsible for implementing the post-construction runoff plan review and field inspections are appropriately trained. The program will continue to be assessed and adaptively managed as needed.

Strategy MS4 - #6 Pollution Prevention in Municipal Operations

Task 1 - OM1 - Routine Maintenance Operations for Water Quality
Springfield will continue to implement routine infrastructure maintenance activities to reduce stormwater pollution such as street sweeping, catch basin cleaning, water quality facility maintenance, etc. A *Storm and Surface Water Maintenance Strategy* was completed during the third Plan cycle and will continue to be implemented and updated (as needed).

Task 2 - OM2 - Pollution Control Manuals and Guidelines for City Operations
Springfield will continue to implement the Pollution Control Manual for Routine Maintenance Activities, and other stormwater pollution guidance manuals, to minimize impacts to stormwater runoff. These manuals will be reviewed and updated as needed during the fourth Plan cycle. A 1200z determination was completed for City-owned facilities during the third Plan cycle.

Task 3 - OM3 - Municipal Operations Training, Tracking, and Assessment
Operations staff will continue to be trained on best management practices to prevent pollution. The municipal operations program will continue to be reviewed according to the requirements of the current MS4 permit.

Section 5 – Performance Monitoring & Plan Review

The ultimate measure of success for area TMDL programs will be the de-listing of 303(d)-listed streams throughout the Willamette Basin. Monitoring the performance of this plan requires monitoring both the success of implementing the measures outlined in the plan (implementation monitoring) and the effectiveness of the measures at reducing pollution (effectiveness monitoring).

Implementation Monitoring

Springfield will update the status of each strategy within the TMDL Implementation Plan Matrix (Appendix A) and submit this along with a progress report to DEQ by November 1st of each year.

Where implementation of a particular measure is infeasible, unavoidably delayed, or the target date is otherwise not able to be met, staff will evaluate the cause. Options include adaptively managing to facilitate implementation of the measure, developing an equivalent measure, or working with the DEQ to develop a strategy for accomplishing a similar result using an alternate method or schedule.

Effectiveness Monitoring

Some strategies, such as planting trees for shade along waterways, may take years to produce measurable benefits. Within that time frame, other factors, such as changes in stream flow, local land uses, or climate change may generate long-term alterations in temperature regimen, making monitoring results unreliable. Other measures, such as erosion and sediment control ordinances or pet waste management programs, may produce results that are not readily quantified or may result from unknown outside influences.

Springfield recognizes that the effectiveness of the Plan will be best measured by tracking implementation of strategies identified in this Plan that are generally recognized as effective by the DEQ and other experts. Therefore, implementation monitoring target dates in the plan are important measures of overall plan effectiveness. Target dates for implementation are identified for each strategy in Appendix A.

Plan Review

The City must monitor both its progress with implementing the provisions of the Plan and the effectiveness of the Plan itself, including any changes or adaptive management measures proposed or incorporated into the Plan.

Springfield will evaluate this Plan every five years. The review report is a DEQ-developed online form that evaluates the overall effectiveness of the Plan. It will also provide an opportunity to revise the Plan as needed to constructively build for success in the next five years.

Annual progress reports will present the implementation status of the various strategies and measures within Springfield's TMDL Implementation Plan Matrix (Appendix A). It

will also include adaptive management measures taken or proposed to enhance Plan effectiveness annually.

Section 6 – Compliance with Land Use Requirements

Oregon law requires all cities to adopt Comprehensive Plans and to coordinate their public actions to be consistent with the adopted plan. Plans are based on 20-year population projections and must meet Statewide Planning Goals intended to guide the use of land to: provide a healthy environment; sustain a prosperous economy; ensure a desirable quality of life; and equitably allocate resources across neighborhoods.

This section documents the role the Eugene-Springfield Metropolitan Area General Plan (Metro Plan), Springfield Comprehensive Plan, Springfield Development Code (SDC), and Springfield Engineering Design Standards & Procedures Manual (EDSPM) play in ensuring that implementation of the TMDL maintains consistency with local and regional plans, Statewide Planning Goals, and Oregon land use law.

Typically, the Metro Plan and Springfield Comprehensive Plan are used during quasi-judicial and legislative land use reviews. The SDC and EDSPM are used together in the evaluation of most land use applications, especially partitions, subdivisions, and site plans. The Springfield Municipal Code is used for processing Land and Drainage Alteration Permits and enforcing erosion control regulations in the field (see Section 7).

Metro Plan and Comprehensive Plan

Springfield adopted the Metro Plan by Ordinance 5024 in March 1982. The Metro Plan has been amended many times since then. In response to 2007 legislation, Springfield has been transitioning from relying solely on the regional comprehensive plan–the Metro Plan–to a city-specific Springfield Comprehensive Plan. While the Metro Plan continues to be the guiding document for some topics (or "elements"), the City created a Springfield Comprehensive Plan with its own goals and policies for certain elements to guide Springfield's growth and development. The goals in the Metro Plan that are applicable to the TMDL are provided below.

C. Environmental Resources Element
Goals:

1. Protect valuable natural resources and encourage their wise management, use, and proper reuse.
2. Maintain a variety of open spaces within and on the fringe of the developing area.
3. Protect life and property from the effects of natural hazards.
4. Provide a healthy and attractive environment, including clean air and water, for the metropolitan population.

D. Willamette River Greenway, River Corridors, and Waterways Element
Goal:
To protect, conserve, and enhance the natural, scenic, environmental, and economic qualities of river and waterway corridors.

E. Environmental Design Element
Goals:

1. Secure a safe, clean, and comfortable environment which is satisfying to the mind and senses.
2. Encourage the development of the natural, social, and economic environment in a manner that is harmonious with our natural setting and maintains and enhances our quality of life.
3. Create and preserve desirable and distinctive qualities in local and neighborhood areas.

G. Public Facilities and Services Element
Goals:

1. Provide and maintain public facilities and services in an efficient and environmentally responsible manner.
2. Provide public facilities and services that encourages orderly and sequential growth.

Springfield Development Code (SDC)
The SDC is a comprehensive land use and development document that governs all of the land within Springfield's City Limits and its urban services area. For the full Code, see: https://library.qcode.us/lib/springfield_or/pub/development_code

The SDC was adopted by Ordinance 5326 in May 1986. The SDC has been amended many times since that date. The Stormwater Plan boundary is contiguous with the SDC boundary. There are a number of overlay districts that address drinking water and natural resource protections:

Section 3.3.200 Drinking Water Protection Overlay District
Section 3.3.300 Willamette Greenway Overlay District
Section 3.3.400 Floodplain Overlay District
Section 3.3.500 Hillside Development Overlay District
Section 3.4.200 Glenwood Riverfront Mixed-Use Plan District

Chapter 4 *Development Standards* addresses stormwater management and natural resource protections:
Section 4.3.110 Stormwater Management
Section 4.3.115 Water Quality Protection
Section 4.3.117 Natural Resource Protection Areas

Chapter 5 *The Development Review Process and Applications* provides uniform procedures for the granting or denial of applications and determinations by the City of Springfield under the applicable State of Oregon Statutes and rules, Springfield Comprehensive Plan, Springfield Development Code, and other ordinances which by their terms incorporate by reference the procedures in this section.

Note that SDC 5.19.100 *Tree Felling Permit* covers the requirements for the protection and replacement of trees.

The SDC includes provisions for notification and request for comments to affected agencies, including those having requirements applicable to a proposed land use, and other interested parties. Correspondence received during the comment period becomes part of the findings included in the staff report and may be included in conditions that must be met in resulting land use approvals. Through this process, the Development and Public Works Department is delegated the authority to impose standards for erosion control and stormwater management for land use decisions made in accordance with the SDC.

Engineering Design Standards & Procedures Manual (EDSPM)
The EDSPM contains design standards and procedures that are meant to establish, clarify, and assist both City staff and private engineers in creating safe, efficient, and cost-effective street, drainage and sanitary sewer projects within the City. The EDSPM was adopted by Resolution 02-46 in October 2002 and has been amended many times since then including in 2023-2024 to meet the requirements of Springfield's MS4 permit.

For the current manual, see: https://springfield-or.gov/city/development-public-works/engineering-design-standards-and-procedures-manual/

Section 7 – Additional Requirements

7.1 Funding

The majority of TMDL plan measures are funded under existing programs for stormwater and wastewater. The primary funding sources for these programs are stormwater and wastewater enterprise funds (e.g. user fees). These funds pay for the construction, operation, and maintenance of these systems.

In addition, System Development Charges (SDCs) fund the City's CIP, which include stormwater and wastewater projects. Grants have been a funding source for some CIP projects. The City's budget by fiscal year is available on our website at: https://springfield-or.gov/city/finance/budget/

The City of Springfield anticipates using a variety of strategies to address Plan implementation costs, including using existing budgets and resources, budgeting for future programs through the existing budgetary processes, and developing collaborative and mutually beneficial partnerships. A key to the success of this strategy is prioritization of projects where initial funding is inadequate, and a plan to pursue needed funding over time for lower priority projects. In all cases, efforts will be made to leverage Springfield's funds effectively, be responsive to unforeseen opportunities, adapt to changing economic realities, and pursue creative and innovative approaches to funding.

7.2 Legal Authority

The City maintains the legal authority to prohibit illicit discharges and require erosion prevention and control techniques through Springfield's municipal code, available at: https://library.qcode.us/lib/springfield_or/pub/municipal_code

SMC 4.370 – 4.372 Illicit Discharge
Sets forth specific rules and regulations to control discharges of any substance into the stormwater system if the discharge poses a threat to health, safety, public welfare, or the environment, or is otherwise prohibited by law.
https://library.qcode.us/lib/springfield_or/pub/municipal_code/item/chapter_4-illicit_discharge?view=all

SMC 8.300 – 8.420 Grading
Sets forth specific rules and regulations to control excavating, grading, and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and of safeguarding persons and property against unreasonable hazards resulting from uncontrolled grading and excavating practices in the interest of protecting the public health, safety and general welfare. The permit issued by the City for this work is called the Land and Drainage Alteration Permit. Erosion control is currently a part of the LDAP review process.
https://library.qcode.us/lib/springfield_or/pub/municipal_code/item/chapter_8-grading?view=all#chapter_8-grading-8_312