

FG-413.30
FG-413.50
2% MIN
NEW RECAST
D ELEV
PRECAST CONCRETE
OUTLET VAULT
D ELEV= 3.2, S
NEW GRAVE
19'

WILLAMETTE BASIN
TOTAL MAXIMUM DAILY LOAD (TMDL)
IMPLEMENTATION PLAN

5-YEAR REPORT
2018-2022

THE CITY OF LYONS

LINN COUNTY, OREGON



PREPARED BY:



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1. EXECUTIVE SUMMARY

The City of Lyons, OR works with the Oregon Department of Environmental Quality to implement Total Maximum Daily Loads and improve water quality in the Willamette Basin. The primary goal is to reduce loadings of mercury, temperature, and bacteria from the City's drainage system to the North Santiam River. As part of the City's TMDL Implementation Plan, the City maintains a publicly-accessible matrix of Best Management Practices. This matrix is comprised of actions the City takes to inform and involve the public in stormwater pollution control, and to reduce pollution from municipal operations, development, and illicit discharges.

This report is a comprehensive review of the City's implementation of these Best Management Practices and the overarching TMDL Implementation Plan over the 2018 to 2022 reporting period. Overall, the City has made significant progress towards implementing the TMDLs. During this reporting period, the following were the City's major accomplishments:

- Development of Street and Storm Drain Design Standards to reduce sheet flow and erosion from new development.
- Implementation of a website dedicated to providing the public with stormwater information and a medium to report illicit discharges.
- Coordination with the North Santiam Watershed Council to improve the riparian corridor in the City.
- Establishment of pet waste stations and public toilets to reduce bacterial pollution in runoff.

This report also presents the City's Best Management Practices Matrix for the upcoming reporting period (2023 to 2027). Many of the actions from the previous reporting period are still viable and helpful for the city's TMDL Implementation Plan, and therefore were retained in the matrix for the upcoming period. Some new actions were also added, aimed at implementing the City's new design standards, updating the municipal code to comply with new mercury TMDL guidelines, and to create a digital inventory of the City's drainage infrastructure.

2. INTRODUCTION

The City of Lyons, OR (City) maintains a simple drainage system for flood management. Stormwater in the City either infiltrates into the subsurface or is conveyed through the City's drainage system to the North Santiam River. The North Santiam River's Watershed is a subbasin to the broader Willamette Basin. The Willamette Basin contains approximately 70 percent of Oregon's population, a majority of Oregon's agricultural land, and is a significant fish habitat in the Pacific Northwest.

Currently, the Willamette River and many of its tributaries are considered impaired under Clean Water Act §303(d). These listings come from observed exceedances of water quality standards throughout the Willamette Basin for the following pollutants:

- Mercury
- Temperature
- Bacteria

The United States Environmental Protection Agency (USEPA) and the Oregon Department of Environmental Quality (ODEQ) established Total Maximum Daily Loads (TMDLs) for these pollutants to regulate their input to the Willamette Basin. A TMDL is the total amount of a pollutant that can enter a waterbody without posing harm to human health and/or the environment.

The City of Lyons works with ODEQ to implement the TMDLs within its jurisdiction to minimize loadings of mercury, bacteria, and temperature into the North Santiam River and the broader Willamette Basin. The City is classified as a Designated Management Agency (DMA) with a population less than 5000 people. As such, the City maintains a TMDL implementation plan to reduce pollutant loads from stormwater runoff.

This report provides an evaluation of the City's TMDL implementation plan for the 2018 to 2022 reporting period and presents an updated TMDL Implementation Plan for the next reporting period (2023 to 2027).

3. BACKGROUND

3.1. CURRENT TMDLS

The most recently issued TMDLs for the Willamette Basin were published in 2006 for temperature and bacteria, and in 2021 for mercury.

3.1.1 Mercury TMDL

Methylmercury, an organic form of mercury, is highly toxic. Mercury that enters a riverine system can enter the food chain, and bioaccumulate in fish as methylmercury. This becomes a risk to human health when these fish are eaten by humans. Throughout the Willamette Basin, fish consumption advisories are in place due to exceeded water quality standards for mercury.

ODEQ proposed a mercury TMDL revision in 2019, and the USEPA revised and issued the TMDL in 2021. ODEQ calculated the excess mercury load in the Willamette Basin as 318 g/day. Nonpoint sources, such as stormwater runoff and erosion, make up a substantial portion of the mercury loads. The reduction requirement of mercury loadings is 75% for non-permitted urban stormwater.

3.1.2 Temperature TMDL

The life cycles of fish are intrinsically linked to the temperatures of their habitats. Human activity and improper management of riparian areas can lead to increases of thermal energy to water bodies. Persistent elevation of stream temperatures caused by anthropogenic activity can threaten the viability of fish, such as salmon and steelhead.

The North Santiam River was listed as core cold-water habitat and a designated stream for salmon and steelhead spawning and rearing in the 2006 Temperature TMDL. Approximately 1,200 miles of river and stream in the Willamette Basin were listed on the 2002 §303(d) list as impaired for temperature, including fourteen segments of the North Santiam River. In 2006, current heat loads throughout the Willamette Basin were calculated as 1.6 to 2.6 times greater than those needed to meet Oregon's human use allowance of 0.3°C.

3.1.3 Bacteria TMDL

Pathogenic microorganisms, including bacteria, viruses, and protozoa, can cause deadly disease when ingested. The presence of pathogenic microorganisms has traditionally been

inferred by the presence of indicator microorganisms, which in Oregon and many other states, is the enteric, gram-negative, lactose-fermenting bacteria *Escherichia coli*. While most *E. coli* are not pathogenic, their association with fecal matter is indicative of pollution sources that are likely to include pathogens.

Historically, bacterial exceedances occur between October and March in the Willamette Basin. The City of Portland collected data that was published in the 2006 Temperature TMDL that indicated violations of bacteria standards cooccurred with storm events in the reach of the Willamette River impacted by combined sewer overflows. While disturbances at point sources like wastewater treatment plants are probably responsible for much of the fecal contamination in the Willamette basin, stormwater runoff from public areas with improper waste management practices can also significantly contribute to bacterial loads into rivers and streams.

Nonpoint Sources, including stormwater, contribute an excess load of 2.31×10^{14} *E. coli*/day to the Willamette Basin according to the 2006 Bacteria TMDL. Implementation of the Bacteria TMDL was expected to bring the entirety of the upper reach of the Willamette River into compliance with the bacteria water quality standards. Bacteria targeted reductions range from 66% to 83% for agricultural regions and 80% to 94% for urban areas. No streams were identified in the North Santiam Subbasin as water quality impaired for bacteria, but ODEQ concluded that water quality across the basin would benefit from comprehensive implementation of targeted reductions even in the absence of documented *E. coli* exceedances.

3.2. TMDL IMPLEMENTATION

3.2.1 City of Lyons Drainage System

The City has a population of 1207. A Storm Drainage Plan was prepared in 2011 by Ukiah Engineering, Inc. that described the City's drainage system inventory and recommended several improvement projects. The system primarily consists of surface drainage to roadside ditches, culverts, natural streams, and storm drain systems installed by the State or County. The City, which has limited public works staffing, primarily handles system maintenance by contractors.

3.2.2 Water Quality Management Plan

The reduction targets in the TMDLs are accomplished by following the Water Quality Management Plan (WQMP) prepared by ODEQ. The WQMP provides DMAs with a framework

to implement the TMDLs. The most recent WQMP was issued in 2019 with ODEQ's mercury TMDL revision. A WQMP was also issued with the 2006 TMDLs for all three pollutants.

The City of Lyons is classified within the DMA category of "*Cities with populations less than 5,000 people*" as defined by ODEQ's 2019 WQMP. Six Stormwater Control Measures were listed in the WQMP to help DMAs develop TMDL implementation plans. The City identified feasible actions within the scope of these measures and developed a matrix of Best Management Practices (BMPs) to document the specific actions the city is taking as part of its implementation plan. These six stormwater control measures are listed below:

- Pollution prevention and Good Housekeeping for Municipal Operations
- Public Outreach and Education
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Site Runoff for New Development and Redevelopment

4. LYONS TMDL IMPLEMENTATION PLAN

The City is committed to reduce loadings of temperature, bacteria, and mercury into the North Santiam River and the broader Willamette Basin. For the past five years, the City has maintained a TMDL implementation plan commensurate with the responsibilities of DMAs with populations under 5,000 people in Oregon.

4.1. BEST MANAGEMENT PRACTICES MATRIX

The City maintains a list of feasible Best Management Practices to reduce stormwater pollution into the North Santiam. This list has been presented as the City's TMDL BMP Matrix, attached in Appendix A. For each action, the matrix contains the applicable stormwater control measure, the action's deliverable, the source of funding for the action, and an estimated timeline for each action.

4.2. ANNUAL REPORTS

In addition to this 5-year report, the City has annually reported on progress towards the TMDL implementation plan to ODEQ either through in-person meetings or written reports. In-person meetings were held alongside other City DMAs in the North Santiam subbasin (Mill City, Detroit, Gates, and Idanha). Every year, the BMP Matrix is reported along with a documented list of significant actions taken on the stormwater system and the TMDL implementation plan recorded by the City Manager.

4.3. 2022 UPDATES TO MERCURY TMDL IMPLEMENTATION PLAN

The City updated its TMDL implementation plan and BMP Matrix in November 2022, which was revised in January 2023, to the requirements of the new (2021) Mercury TMDL and WQMP. A feasibility analysis was conducted to evaluate whether the City could fully or partially comply with the six Stormwater Control Measures. All of the measures were at least partially feasible for the City. Some of the actions in the City's BMP Matrix were already in-line with the new Mercury TMDL requirements, and some new mercury specific actions were added into the implementation plan.

5. 2018-2022 PROGRESS ASSESSMENT

The City has made significant progress on its TMDL Implementation Plan by working towards the actions in the BMP Matrix. A substantive review of the progress for each action in the BMP Matrix is provided in Table 5.1. This section also contains a summary of accomplishments within the 2018 to 2022 reporting period and presents the actions in reference to what stormwater control measure they fall into.

5.1. MAJOR ACCOMPLISHMENTS

The following were the major accomplishments that the City made in the 2018 to 2022 reporting period towards the City's TMDL implementation plan:

- The City implemented a public outreach program by developing a publicly accessible website that contains TMDL information, public notices about responsible actions to reduce stormwater pollution, and a form to report illicit discharges. The City also regularly posted flyers on community reader boards to encourage pollution reducing actions, such as maintaining driveways and drainage areas, and picking up dog waste.
- The City codified and implemented new Street and Storm Drain Design Standards. These can be referenced from the City's Development Permits website: <https://www.cityoflyons.org/codes-permits/development-permits/>. These standards will ensure that sheet flow on newly developed property will be minimized to reduce erosion and pollution entering the city's drainage system.
- The City partnered with the North Santiam Watershed Council to facilitate the removal of invasive *Ludwigia*. This helps protect the riparian corridor, and more native, shade-bearing plants can now thrive where the *Ludwigia* was removed which could help the basin meet Temperature TMDL reduction targets.
- Pet Waste Stations were installed to provide the public with bags to pick up and properly dispose of dog waste. This will reduce *E. coli* transmission to the North Santiam, as the waste will be disposed of prior to being picked up by runoff.

- Three portable toilets were installed at the City's park areas to provide the public and travelers through the City dedicated spaces to use the restroom, which will reduce it happening in areas that may drain to the city's drainage system.

5.2. ANALYSIS OF IMPLEMENTATION PLAN ACTIONS

There were nineteen actions listed in the City's BMP Matrix throughout 2018-2019. These actions all addressed Mercury, Temperature, or Bacteria load reductions, and many actions addressed multiple pollutants. These actions are discussed in terms of their applicable control strategy as listed in ODEQ's WQMP. A statement on progress during the reporting period for each action is provided in Table 5.1.

Most actions had significant progress made, except for actions added at the end of the reporting period as part of the Mercury TMDL update. There were also some actions that were not able to be fully implemented, such as improvement projects listed in the City's Storm Drainage Plan to provide for growth or requiring 1200-C permit coverage, because there were not any significant developments during the reporting period. Some actions are recurring and will be retained for the next reporting period; the rollover of actions to the next reporting period are also discussed in Table 5.1.

5.2.1 Pollution prevention and Good Housekeeping for Municipal Operations

- Action 4: Regular System Maintenance. Ensure that water flow is not impeded in the City's drainage system by regularly removing debris and landscaping when needed.
- Action 5: Work with North Santiam Watershed Council to protect and improve riparian corridors.
- Action 6: Comply with Oregon Water Resources Department Permit R-87877 to protect native beaver habitat and retain natural instream woody debris where feasible.
- Action 7: Install portable toilets to reduce bacteria inputs to the City's drainage system.
- Action 9: Implement the improvement plan from the City's Storm Drainage Plan.
- Action 16: Update the existing map of the City's drainage system inventory.

5.2.2 Public Outreach and Education

- Action 1: Provide the public with information on the City's TMDL Implementation Plan and with helpful information and references on how to reduce pollutant loads. Provide this information through a publicly accessible website and through physical flyers distributed in public locations.
- Action 8: Provide the public regular reports on water quality monitoring data for the North Santiam River and groundwater sources.
- Action 15: Hold City Council meetings annually, open to the public, to discuss the TMDL implementation plan annual report.

5.2.3 Public Involvement and Participation

- Action 5: Work with North Santiam Watershed Council to protect riparian corridors. Provide volunteer opportunities in the City to help improve the North Santiam River ecosystem.
- Action 11: Update the City's Comprehensive Plan. Modifications to the City's Municipal Code require public comment sessions where the public can participate in the process of developing policies that contribute to TMDL implementation.
- Action 14: Provide pet waste bags so the public can dispose of pet waste appropriately, reducing bacterial loads to the North Santiam River.
- Action 19: Public comment period required for any updates or amendments to municipal code or design standards.

5.2.4 Illicit Discharge Detection and Elimination

- Action 10: A form is provided on the City's website to provide a way for the public to report illicit discharges to the City's drainage system.
- Action 12: Provide the public with information on grants available to repair failing septic systems, a major bacteria pollution source.
- Action 17: Revise municipal code to codify the prohibition of illicit discharges.

5.2.5 Construction Site Runoff Control

- Action 2: Require all development in the City of one acre or more to have 1200-C permit coverage prior to development.
- Action 13: All construction sites must follow the City's codified Floodplain Management Plan.

5.2.6 Post-Construction Site Runoff for New Development and Redevelopment

- Action 3: All new private development must retain the historical flows into the City's drainage system prior to new added impervious surface by constructing retainment, infiltration, or treatment facilities.
- Action 13: All construction sites must follow the City's codified Floodplain Management Plan.
- Action 18: Public Works Design Standards to be updated to confer with requirements of 1200-C permits.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
#	What pollutants did the TMDL address?	What is being done?	Start? End? Ongoing?	How will this be paid for?	Statement on Progress from 2018-2022	Will this be retained for new 2023-2027 Matrix?
1	Bacteria, Mercury, Temperature	Education and outreach for protection of surface and drinking water.	Ongoing annual requirement, administer survey by 2027	Funding included in basic operational costs.	<p>The City created a webpage for water quality information, accessible via: https://www.cityoflyons.org/resources/water-quality-program/.</p> <p>This website was updated regularly with information related to the TMDL Implementation Plan, including annual reports, implementation matrices, and public notices.</p> <p>Additionally, reader boards at the City's post office and City Hall were updated at least two times per year with posters notifying citizens on how they can minimize stormwater pollution, including picking up pet waste, maintaining driveways and culverts, and reporting illicit discharges.</p>	<p>This action will be mostly retained for the 2023-2027 Matrix. The website will continue to be updated as new information related to stormwater management, such as this report and the new matrix, is available. The physical reader boards will also be regularly updated.</p> <p>The action on a qualitative survey, added as part of the Mercury TMDL Implementation plan in Early 2023, will be retained as a separate action in the new Matrix.</p>
2	Bacteria, Mercury	Coordinate permit acquisition with Linn County and developers for >=1 acre	Ongoing city business	Ongoing city business	No 1200-C permits were issued within Lyons' jurisdiction in the 5-year period.	This action will be retained as-is for the 2023-2027 Matrix.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
3	Bacteria, Mercury	Install detention ponds and catch basins in new developments to control excess flow from run-off (ongoing).	Ongoing city business	Ongoing city business	<p>While there was not any significant property development that occurred in this 5-year period, new standards for the construction of drainage infrastructure were developed and codified in 2021.</p> <p>The City is currently working on annexing a property to develop approximately 15-20 houses. Although the timeframe for actual development on this property is distant, the new construction standards will ensure that this site and others will have properly designed and installed drainage systems.</p>	This action will be retained for the 2023-2027 Matrix with a minor modification. The statement "ensure all plans for new development are checked against existing storm drainage construction standards" will be added as a deliverable to this action.
4	Potential Bacteria or Mercury	Schedule and monitor sediment catch basin cleaning and performance and debris blockage in culverts	Ongoing, performed as needed	Funding included in basic operational costs.	<p>Catch basin inspection and maintenance was performed annually, in addition to responding to reports on plugged basins and culverts. Specific locations of catch basin issues that were responded to were documented in the yearly action lists that append the Implementation Plan Matrix.</p> <p>In some instances, it was recognized that actions of private homeowners were causing public facility maintenance to be more-regularly required, for example, improperly disposing grass clippings in drainage ditches. In these instances, the homeowners were promptly notified by the City to remediate the situation.</p>	This action will be retained for the 2023-2027 Matrix with a minor modification. The word "amount" will be removed from the deliverable as the catch basin cleaning is performed via contractors, and the volume or weight is not recorded by the contractor when the work is performed. Locations will continue to be recorded in the City Manager's notes.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
5	Temperature	Seek collaboration, partnerships and grant funding in order to implement riparian enhancement projects.	Ongoing	Grants and General Fund funding.	The City has collaborated with the North Santiam Watershed Council on projects to control invasive <i>Ludwigia</i> . In addition to providing the community with volunteer opportunities, the removal of <i>Ludwigia</i> helps protect the riparian corridor from anoxic conditions. Because <i>Ludwigia</i> outcompetes native plants, its targeted removal is necessary to restore the banks with more shade-providing plants.	This action will be retained as-is for the 2023-2027 Matrix.
6	Temperature	Reduce warm water flowing from the ponds into the North Santiam thereby decreasing solar radiation effect for improved fish and wildlife habitat	Ongoing OWRD Permit R-87877	Ongoing city business, explore grant possibilities.	All provisions of OWRD Permit R-87877 were followed during this time period. Reports related to beavers were recorded in the annual action lists in the TMDL Implementation Plan Matrix. No grants specific to Beaver habitat restoration were awarded to the City or its collaborators during this time period.	This action will be retained as-is for the 2023-2027 Matrix.
7	Bacteria	Provision of sanitary services at city parks	Ongoing permanent placement	Ongoing city business.	Three portable toilets were placed in the City's public areas. There were issues with vandalism and arson at one of the portable toilets but it was promptly replaced. The City is in the process of replacing one of the portable toilets with a permanent bathroom structure at the Park. The porta potty will be moved to the City's shop and warehouse.	This action will be retained for the 2023-2027 Matrix with a minor modification. The deliverable will include more specifics about the construction of the new permanent facility at the park and the timeline will include a target year to complete the project by.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
8	Bacteria, Mercury, Petroleum	Protect City of Lyon's high quality drinking water source	Ongoing	Ongoing city business.	<p>As part of the Water Quality webpage mentioned in Action Item #1, the annual reports on drinking water are provided to the public.</p> <p>Also on the website, The City implemented an Environmental Health Complaint Form that allows the public to notify the City of Illicit Discharges to stormwater facilities.</p>	This action will be retained as-is for the 2023-2027 Matrix.
9	Mercury, Bacteria	Development and Implementation of a Stormwater Drainage Plan (SWDP).	2019-2024 following 5 year review - implement priority actions	Street Fund	<p>A Stormwater Drainage Plan (SWDP) was prepared by Ukiah Engineering, Inc. in 2011. The plan recommended \$2,068,503 worth of improvement projects to improve drainage, detain and provide treatment for stormwater in the City.</p> <p>Implementation of this plan has been ongoing. For example, developing drainage construction standards was recommended in the SWDP and was accomplished in this reporting period. Other items, such as increasing system capacity, are to be implemented as development occurs.</p>	This action will be retained as-is for the 2023-2027 Matrix. This action coincides with the efforts of Action #16, which was added as part of the new Mercury TMDL update regarding updating the stormwater map. All mapping of City's drainage system is a part of the SWDP.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
10	Potential Mercury, Nutrient Related, PAHs, Lead	Document the complaints/concerns received. Follow ordinance violation procedure up to and including court action.	Ongoing program	Ongoing city business.	The City implemented an Environmental Health Complaint Form that allows the public to notify the City of Illicit Discharges to stormwater facilities. No reports have been made using this form, citizens have preferred to call City Hall directly. The link on the website was updated in 2023 to state the purpose of the form more clearly.	This action will be retained as-is for the 2023-2027 Matrix.
11	All parameters	Review and update the Lyons Comprehensive Plan to reflect strategies adopted in the TMDL Plan.	2019-2024	Ongoing City business.	The City is currently working on updating all of the codes, with the Subdivision code being the current priority. The Comprehensive Plan will be updated as part of the code revision process, likely within the next reporting cycle.	This action will be retained as-is for the 2023-2027 Matrix.
12	Bacteria, nutrients, phosphorous, and nitrates	Grant funding for the repair of a rehabilitative housing including repair/replacement of failing septic.	Ongoing program	Grant funding.	The city was awarded \$250,000 for a program to help citizens repair failing septic systems. The assisted about 32 persons; there were six draws on the money that provided funds for repairs to 13 households. This program has since been closed, but a similar program is available through the DEQ-Craft 3 Loans for Septic Systems.	This action will be modified to reflect the current situation: on the City's Helpful Links website page, a link to DEQ-Craft 3 Loans for Septic Systems will be maintained. https://www.cityoflyons.org/resources/helpful-links/ The City will also help homeowners with other loan and grant applications, such as the USDA Rural Development home repair assistance loans & grants for low income homeowners.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
13	Bacteria, dissolved oxygen, turbidity, mercury, pesticides, nutrients, and temperature.	Adoption of Floodplain Management Plan preventing and/or regulating development of properties vulnerable to floods.	Adopted July 27, 2010. Implemented and ongoing for 2019-2024	Ongoing City business.	The Floodplain Management Plan resulted in a significant addition to the City's Municipal Code, available for reference here: https://www.codepublishing.com/OR/Lyons/#!/html/Lyons15/Lyons1510.html This code provides developers and private owners appropriate guidelines for developing and maintaining properties and reducing erosion issues.	This action will be retained as-is for the 2023-2027 Matrix.
14	Bacteria	Provide bags for dog owners to pick up pet waste	Ongoing Permanent	City Budget	Pet Waste Stations were installed throughout green areas in the City to provide the public with the means to properly dispose of dog waste. The City regularly restocked bags and removed trash.	This action will be retained as-is for the 2023-2027 Matrix.
15	Bacteria Mercury Temperature	City Council review and acknowledgement of TMDL progress reporting	Annually for 2019-2024	Ongoing city business	City council meetings regarding TMDL implementation occurred annually. Meeting minutes are available on the City's website or upon request to the City.	This action will be retained as-is for the 2023-2027 Matrix.
16	Mercury	Update existing map of existing drainage infrastructure and outfalls to reflect current conditions.	Existing map checked and updated by January 2025.	Funding included in basic operational costs.	Map is part of Stormwater Master Plan, but currently the maps only exist in paper (or pdf) form. The City reached out to Engineer that prepared the plan but did not receive a response. The City plans to access the survey data used to prepare the map to digitize and update the map.	This action will be retained as-is for the 2023-2027 Matrix.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
17	Mercury	Update municipal code to clarify illicit discharges and enforcement	Initial discussions with Council in 2023. Draft language for Code revisions in 2024. Code revision vote by Council in 2025.	Ongoing city business	Action was added as part of the 2022-2023 Mercury TMDL Implementation Plan Update. The council in the process of updating municipal code, will likely make progress on this action later in 2023.	This action will be retained as-is for the 2023-2027 Matrix.
18	Mercury	Update the City's Public Works Design Standards	2024-2029	To be determined as part of strategy implementation	<p>Action was added as part of the Mercury TMDL Implementation Plan Update. The plan was revised in early 2023 to detail the following timeline:</p> <p>Solicit input from City Planner and Engineer by end of 2024.</p> <p>Identify funding source(s) for the design standards update work by end of 2026.</p> <p>Prepare draft standards revisions and engage planning commission for input on design standards revisions in 2027.</p> <p>Engage City Council in review and approval of standards by end of 2029.</p>	This action will be retained as-is for the 2023-2027 Matrix.

Table 5.1 Progress Assessment of BMP Matrix Actions, 2018-2022

	POLLUTANT	MANAGEMENT STRATEGY	TIMELINE	FUNDING	PROGRESS	STATUS
19	Mercury	Provide an opportunity for public comments on amendments to municipal code and/or Public Works Design Standards	Concurrent with Items #17 and #18, engage City Council in review and approval of standards by end of 2029.	Ongoing city business	Action was added as part of the 2022-2023 TMDL Implementation Plan Update. Public comment sessions will be held at City Council meetings with the timeline listed above in Action #18.	This action will be retained as-is for the 2023-2027 Matrix.

6. 2023-2027 IMPLEMENTATION PLAN

6.1. GOALS IN NEXT REPORTING PERIOD

The City will continue to work with ODEQ to implement the mercury, bacteria, and temperature TMDLs for the next reporting period: 2023 to 2027. The City will continue to organize its actions towards TMDL implementation in a BMP Matrix in next reporting period, and will report annually to ODEQ on its progress. A draft of the BMP Matrix for the next reporting period is provided in Appendix B. The primary goals for the next reporting period are:

- Implement the new actions added in the 2022-2023 Mercury TMDL Implementation Plan Update;
- Continue to work with the North Santiam Watershed Council on riparian enhancement projects;
- Implement new storm drainage construction standards for new developments that are expected in the next reporting period;
- Continue to revise Municipal Code, including design standards and the City's comprehensive plan, to be in line with the City's TMDL Implementation Plan;
- Pursue funding, including loans and grants, to implement improvement plans provided in the 2011 Storm Drainage Report;
- Update the maps in the Stormwater Drainage Report and develop a digital inventory of the City's Drainage System.

6.2. RETURNING ACTIONS

Many actions from the 2018-2022 BMP Matrix are still relevant for the next reporting period. These actions will be retained as discussed in Table 5.1, some with minor modifications:

- Public Outreach Program, upkeep of website implemented in the 2018-2022 reporting period;
- Track number of 1200-C permits issued;
- Track maintenance activities on public stormwater facilities;

- Comply with Oregon Water Resources Department permit #R-87877 regarding protection of beaver habitat;
- Monitor reports on water sources for the Lyons-Mehama Water District and provide reports to the public;
- Track complaints/reports of illicit discharges and the steps taken to stop the illicit discharges;
- Update the Comprehensive Plan to reflect strategies in the TMDL Implementation Plan.
- Implementation of the City's Floodplain Management Plan;
- Continue to supply pet waste bags for the public;
- Update the public on new actions taken towards the TMDL Implementation Plan, including this 5-year report and all annual reports.

6.3. NEW ACTIONS

In addition to the returning actions discussed above, the City's TMDL Implementation Plan for the upcoming period includes several new or updated actions from the plan from the previous system. These actions include:

- Implementation of the City's new storm drainage construction standards;
- Construction of new public restroom facilities to minimize bacterial loads;
- Performing a qualitative evaluation of the City's public outreach program.

Because the updates to the mercury implementation plan were revised in January 2023, the following actions added as part of that update could also be considered new actions for the upcoming reporting period:

- Revision and digitization of the City's map of its stormwater facilities;
- Updating the City's municipal code to include prohibitions of illicit discharges to public stormwater facilities;
- Amending the City's Public Works Design Standards to coincide with the requirements of 1200-C permits;
- Providing public participation opportunities in municipal code revisions and revisions to the Public Works Design Standards.

6.4. OUTLOOK ON NEW WILLAMETTE BASIN TEMPERATURE TMDL

The current Temperature TMDL is being replaced, which is likely to affect temperature load allocations for the Willamette Basin and its subbasins. As a DMA within the North Santiam Subbasin, the City will work with DEQ to implement the replacement Temperature TMDL, including revising the implementation plan as necessary.

6.5. LAND USE AND LEGAL COMPLIANCE

The City of Lyons has adequate legal authority to implement the provisions of this TMDL Implementation plan. This plan is consistent with local comprehensive plans and zoning ordinances.

Funding for the provisions as listed in the plan include:

- Basic Operational Costs as Allocated by the Annual Budget;
- Street Maintenance Funds as Allocated by the Annual Budget;
- Grants and the City's General Fund

Enforcement mechanisms for compliance with the provisions of this plan include:

- Titles 15 & 17 of the City of Lyons Municipal Code – Land use, construction standards and specifications, and erosion control requirements:
<https://www.codepublishing.com/OR/Lyons/#!/Lyons15/Lyons15.html>
<https://www.codepublishing.com/OR/Lyons/#!/Lyons17/Lyons17.html>
- Title 18 of the City of Lyons Municipal Code – Zoning criteria:
<https://www.codepublishing.com/OR/Lyons/#!/Lyons18/Lyons18.html>
- Title 19 of the City of Lyons Municipal Code – Comprehensive Plan:
<https://www.codepublishing.com/OR/Lyons/#!/Lyons19/Lyons19.html>
- City of Lyons Street and Storm Drain Design Standards, available on the City's Development Permits website:
<https://www.cityoflyons.org/codes-permits/development-permits/>
- Environmental Health Complaint Form for Illicit Discharge Reporting, available on the City's Water Quality Program website:
<https://www.cityoflyons.org/resources/water-quality-program/>

7. APPENDIX A: 2018-2022 BMP MATRIX

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
1	Bacteria, Mercury, Temperature	Erosion of sediments due to construction and development; Removal of riparian vegetation	Education and outreach for protection of surface and drinking water.	Public education and outreach.	1. Placement date of most current TMDL Plan matrix on City webpage. 2. Number of times electronic reader board updated 3. Number of flyers distributed 4. Qualitative survey to assess public education program	Ongoing annual requirement, administer survey by 2027	1. Update City website to include most current TMDL Plan Matrix. 2. Update reader board 2 times per year to reflect water quality message 3. Distribute or post flyers on web and city board	Funding included in basic operational costs.	Could be used to address Strategy 2 (Public Education and Outreach) and Strategy 3 (Public Involvement and Participation)
2	Bacteria, Mercury	Erosion of sediments due to industrial and residential construction and development	Coordinate permit acquisition with Linn County and developers for >=1 acre	Construction site stormwater runoff	Number of 1200-C permits issued for >=1acre	Ongoing city business	Provide DEQ 1200-C Permit information to Linn County, developers or homeowners as appropriate.	Ongoing city business	Addresses Strategy 5 (Construction Site Runoff Control)
3	Bacteria, Mercury	Erosion of sediments due to excess flow from new and redevelopment	Install detention ponds and catch basins in new developments to control excess flow from run-off (ongoing).	Post construction for new and redevelopment	Confirm new development and redevelopment does not cause flooding or excess flow with post construction measures	Ongoing city business	Implement retainment of historical flows from new development and redevelopment	Ongoing city business	Addresses Strategy 6 (Post-Construction Site Runoff for New Development and Redevelopment)

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
4	Potential Bacteria or Mercury	Sediment laden run off from streets and overflow from properties.	Schedule and monitor sediment catch basin cleaning and performance and debris blockage in culverts	Pollution Prevention in Municipal Operations	1. Report amount and date of debris and sediment removal and catch basin inspections as performed 2. Document number of notifications sent out and date of improved drainage flow	Ongoing, performed as needed	1. Follow developed schedule to clean and inspect public catch basins. 2. Out source contract as needed 3. Number of notifications and debris removal performed	Funding included in basic operational costs.	Addresses Strategy 1 (Pollution Prevention and Good Housekeeping for Municipal Operations)
5	Temperature	Solar Radiation Input	Seek collaboration, partnerships and grant funding in order to implement riparian enhancement projects.	Pollution Prevention in Municipal Operations; Public Education and Outreach	Number of projects implemented and planned; Confirm city owned riparian corridors protected and woody debris based on survey; Provide list of areas for improvement	Ongoing	Track and report riparian enhancement activities by date, location, type of activity for vegetation management along riparian zones: Protect City riparian vegetation; Promote voluntary actions for privately owned river front properties; Retain instream woody debris where feasible and safe; Identify areas for improvement and/or restoration	Grants and General Fund funding.	
6	Temperature	Solar Radiation Input	Reduce warm water flowing from the ponds into the North Santiam thereby decreasing solar radiation effect for improved fish and wildlife habitat	Pollution prevention in municipal operations	Retain beaver dams except to prevent flooding; Visual inspection of pond levels to confirm annually no discharge to North Santiam during June-September	Ongoing OWRD Permit R-87877	1. Cease to remove beaver dams except to the extent necessary to prevent flooding. 2. Decrease areas of stagnated water caused by low water levels. 3. Decrease discharge warm pond waters to the North Santiam.	Ongoing city business, explore grant possibilities.	

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
7	Bacteria	Bacteria Discharged in Effluent at City Park	Provision of sanitary services at city parks	Pollution prevention in municipal operations	3 Pots installed at parks	Ongoing permanent placement	Placement of porta potties at parks	Ongoing city business.	
8	Bacteria, Mercury, Petroleum	Potential contaminant sources to groundwater and drinking water.	Protect City of Lyon's high quality drinking water source	Public Education and Outreach; Pollution Prevention Municipal Operations	Reports showing high quality drinking water; Number of illicit discharges to surfaces waters reported	Ongoing	Continue to monitor reports required by EPA's 40 Code Federal Regulations at the Lyons Mehama Water District.	Ongoing city business.	
9	Mercury, Bacteria	High priority areas of flooding and erosion from stormwater runoff.	Development and Implementation of a Stormwater Drainage Plan (SWDP).	1.) Public education and outreach. 2.) Illicit discharge detection and elimination. 3.) Pollution prevention in municipal operations.	Plan approved Apr 26 2011. 2019-2024 number and type of projects implemented that protect water quality	2019-2024 following 5 year review - implement priority actions	1. Investigate sources of potential funding for SWDP. 2. Include water quality protection priorities and considerations in plan.	Street Fund	
10	Potential Mercury, Nutrient Related, PAHs, Lead	Illegal discharge to the stormwater system or rivers/streams as indicated in complaint.	Document the complaints/concerns received. Follow ordinance violation procedure up to and including court action.	Illicit discharge detection and elimination.	Number of complaints and number of resolutions	Ongoing program	Provide information on website for the public on how to report illegal discharge.	Ongoing city business.	Can be used to partially implement Strategy 4 (Illicit Discharge Detection and Elimination)

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
11	All parameters	NA	Review and update the Lyons Comprehensive Plan to reflect strategies adopted in the TMDL Plan.	NA	1. Number of review planning workshops 2. Discussion on changes following review	2019-2024	Ensure that our jurisdiction's comprehensive planning processes are in compliance with federal and state water quality regulations.	Ongoing City business.	
12	Bacteria, nutrients, phosphorous, and nitrates	Failing on-site septic systems.	Grant funding for the repair of a rehabilitative housing including repair/replacement of failing septic.	Illicit discharge detection and elimination.	Funding received 2002. Track number of septic repairs and replacements	Ongoing program	Document specificities regarding expenditures of funds.	Grant funding.	
13	Bacteria, dissolved oxygen, turbidity, mercury, pesticides, nutrients, and temperature.	Development within floodway or floodplains.	Adoption of Floodplain Management Plan preventing and/or regulating development of properties vulnerable to floods.	Construction site stormwater controls; Post construction in new and redevelopment	Tracking and issuing penalties for non-compliance.	Adopted July 27, 2010. Implemented and ongoing for 2019-2024	Restricting or prohibiting uses which could result in erosion or flooding (ex., controlling the alteration of natural flood plains, stream channels and natural protective barriers)	Ongoing City business.	
	Bacteria	Pet Waste	Provide bags for dog owners to pick up pet waste	1. Continue to supply bags	Prevent bacteria growth	Ongoing Permanent	Maintain stations and replenish supplies.	City Budget	
14	Bacteria Mercury Temperature	NA	City Council review and acknowledgement of TMDL progress reporting	Public Involvement and Participation; Public Education and Outreach	Document date of council meeting for agenda item	Annually for 2019-2024	Coordinate adding agenda for City Council meetings to provided update and document annual and 5 year reports are submitted	Ongoing city business	Addresses Strategy 3 (Public Involvement and Participation)

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
15	Mercury	Public drainage infrastructure	Update existing map of existing drainage infrastructure and outfalls to reflect current conditions	Internal document review	Updated map showing inventory of publically owned catch basins, dry-wells, channels, and piped systems	Existing map checked and updated by January 2025.	Compile as-built drawings of recent development to contribute to map revision	Funding included in basic operational costs.	Addresses Strategy 4 (Illicit Discharge Detection and Elimination)
16	Mercury	Illegal discharge to the stormwater system	Update municipal code to clarify illicit discharges and enforcement	City Council Procedures	Revision to Municipal Code (perhaps existing nuisance code)	Initial discussions with Council in 2023. Draft language for Code revisions in 2024. Code revision vote by Council in 2025.	Draft code revisions prepared and discussed at City Council meeting for public input. Final code language prepared and available for review prior to City Council vote.	Ongoing city business	Addresses Strategy 4 (Illicit Discharge Detection and Elimination)
17	Mercury	Requirements for Post-Construction and New Development	Update the City's Public Works Design Standards	City Council Procedures	Revision to the City's Public Works Design Standards indicating design criteria	Solicit input from City Planner and Engineer by end of 2024. Identify funding source(s) for the design standards update work by end of 2026. Prepare draft standards revisions and engage planning commission for input on design standards revisions in 2027. Engage City Council in review and approval of standards by end of 2029.	List of import revisions to make prepared. Funding need and source identified. Draft standards prepared. Final standards approved.	To be determined as part of strategy implementation	Addresses Strategy 6 (Post-Construction Site Runoff for New Development and Redevelopment)

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING	Relevance to Hg TMDL
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?	
18	Mercury	Municipal Code and Design Standards Update	Provide an opportunity for public comments on amendments to municipal code and/or Public Works Design Standards	Public Involvement and Participation	Minutes from public comment periods at Planning Commission or City Council Meetings where code or design standards are discussed.	Concurrent with Items #16 and #17, engage City Council in review and approval of standards by end of 2029.	Post a draft of proposed revisions to municipal code and/or design standards to City websites and organize a date(s) for public comment	Ongoing city business	Addresses Strategy 3 (Public Involvement and Participation)

8. APPENDIX B: 2023-2027 BMP MATRIX

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
1	Bacteria, Mercury, Temperature	Erosion of sediments due to construction and development; Removal of riparian vegetation	Education and outreach for protection of surface and drinking water.	Public education and outreach.	1. Placement date of most current TMDL Plan matrix on City webpage. 2. Number of times electronic reader board updated 3. Number of flyers distributed	Ongoing annual requirement	1. Update City website to include most current TMDL Plan Matrix. 2. Update reader board 2 times per year to reflect water quality message 3. Distribute or post flyers on web and city board	Funding included in basic operational costs.
2	Bacteria, Mercury, Temperature	Erosion of sediments due to construction and development; Removal of riparian vegetation	Education and outreach for protection of surface and drinking water.	Public education and outreach.	Administer survey to the public to get a qualitative evaluation of the City's Public Outreach Program	Draft Survey by 2024, Administer by 2025, Interpret results for annual report in 2025-2026.	1. Draft of Survey 2. Decide on implementation (online or mailed survey) 3. Compile Results of Survey 4. Report on Survey Results	Funding included in basic operational costs.
3	Bacteria, Mercury	Erosion of sediments due to industrial and residential construction and development	Coordinate permit acquisition with Linn County and developers for >=1 acre	Construction site stormwater runoff	Number of 1200-C permits issued for >=1acre. Ensure all plans for new development are checked against existing storm drainage construction standards.	Ongoing city business	Provide DEQ 1200-C Permit information to Linn County, developers or homeowners as appropriate.	Ongoing city business

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
4	Bacteria, Mercury	Erosion of sediments due to excess flow from new and redevelopment	Install detention ponds and catch basins in new developments to control excess flow from run-off (ongoing).	Post construction for new and redevelopment	Confirm new development and redevelopment does not cause flooding or excess flow with post construction measures	Ongoing city business	Implement retention of historical flows from new development and redevelopment	Ongoing city business
5	Potential Bacteria or Mercury	Sediment laden run off from streets and overflow from properties.	Schedule and monitor sediment catch basin cleaning and performance and debris blockage in culverts	Pollution Prevention in Municipal Operations	1. Report date of catch basin inspections and maintenance as performed 2. Document number of notifications sent out and date of improved drainage flow	Ongoing, performed as needed	1. Follow developed schedule to clean and inspect public catch basins. 2. Out source contract as needed 3. Number of notifications and debris removal performed	Funding included in basic operational costs.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
6	Temperature	Solar Radiation Input	Seek collaboration, partnerships and grant funding in order to implement riparian enhancement projects.	Pollution Prevention in Municipal Operations; Public Education and Outreach	Number of projects implemented and planned; Confirm city owned riparian corridors protected and woody debris based on survey; Provide list of areas for improvement	Ongoing	Track and report riparian enhancement activities by date, location, type of activity for vegetation management along riparian zones: Protect City riparian vegetation; Promote voluntary actions for privately owned river front properties; Retain instream woody debris where feasible and safe; Identify areas for improvement and/or restoration	Grants and General Fund funding.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
7	Temperature	Solar Radiation Input	Reduce warm water flowing from the ponds into the North Santiam thereby decreasing solar radiation effect for improved fish and wildlife habitat	Pollution prevention in municipal operations	Retain beaver dams except to prevent flooding; Visual inspection of pond levels to confirm annually no discharge to North Santiam during June-September	Ongoing OWRD Permit R-87877	1. Cease to remove beaver dams except to the extent necessary to prevent flooding. 2. Decrease areas of stagnated water caused by low water levels. 3. Decrease discharge warm pond waters to the North Santiam.	Ongoing city business, explore grant possibilities.
8	Bacteria	Bacteria Discharged in Effluent at City Park	Provision of sanitary services at city parks	Pollution prevention in municipal operations	3 Pots installed at parks. New permanent bathroom facility installed in park	Ongoing permanent placement. New bathroom facility completed by 2027.	Placement of porta potties at parks, plan review of new bathroom facility completed by City Engineer, restriping of parking-lot to ensure new bathroom facility is ADA accessible completed before facility is opened.	Ongoing city business.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
9	Bacteria, Mercury, Petroleum	Potential contaminant sources to groundwater and drinking water.	Protect City of Lyon's high quality drinking water source	Public Education and Outreach; Pollution Prevention Municipal Operations	Reports showing high quality drinking water; Number of illicit discharges to surfaces waters reported	Ongoing	Continue to monitor reports required by EPA's 40 Code Federal Regulations at the Lyons Mehama Water District.	Ongoing city business.
10	Mercury, Bacteria	High priority areas of flooding and erosion from stormwater runoff.	Implementation of a Stormwater Drainage Plan (SWDP) recommendations and updating map of public stormwater facilities.	1.) Public education and outreach. 2.) Illicit discharge detection and elimination. 3.) Pollution prevention in municipal operations.	SWDP was approved Apr 26 2011. Track the progress of the capital projects recommended in the SWDP as funding is available. Update map of stormwater facilities provided in the SWDP as new facilities are put online by digitizing the map.	Ongoing as capital projects become more necessary and funding is available. Digitize map by 2026. Add new facilities to map as they are constructed.	1. Investigate sources of potential funding for SWDP recommendations 2. Include water quality protection priorities and considerations in plan. 3. Produce an updated map of the City's stormwater facility inventory.	Street Fund
11	Potential Mercury, Nutrient Related, PAHs, Lead	Illegal discharge to the stormwater system or rivers/streams as indicated in complaint.	Document the complaints/concerns received. Follow ordinance violation procedure up to and including court action.	Illicit discharge detection and elimination.	Number of complaints and number of resolutions	Ongoing program	Provide information on website for the public on how to report illegal discharge.	Ongoing city business.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
12	All parameters	NA	Review and update the Lyons Comprehensive Plan to reflect strategies adopted in the TMDL Plan.	NA	1. Number of review planning workshops 2. Discussion on changes following review	City Council updates Comprehensive plan by end of 2024	Ensure that our jurisdiction's comprehensive planning processes are in compliance with federal and state water quality regulations.	Ongoing City business.
13	Bacteria, nutrients, phosphorous, and nitrates	Failing on-site septic systems.	Grant funding for the repair of a rehabilitative housing including repair/replacement of failing septic.	Illicit discharge detection and elimination.	Notify public via the City's website, and work with homeowners to access the Craft3 program to fund repair/replacement of failing septic system	Ongoing program	Maintain a link to the program on the City's website. Post information about the program on the City's physical readerboard.	Grant funding.
14	Bacteria, dissolved oxygen, turbidity, mercury, pesticides, nutrients, and temperature.	Development within floodway or floodplains.	Adoption of Floodplain Management Plan preventing and/or regulating development of properties vulnerable to floods.	Construction site stormwater controls; Post construction in new and redevelopment	Tracking and issuing penalties for non-compliance.	Implemented and ongoing for 2022-2027	Restricting or prohibiting uses which could result in erosion or flooding (ex., controlling the alteration of natural flood plains, stream channels and natural protective barriers)	Ongoing City business.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
15	Bacteria	Pet Waste	Provide bags for dog owners to pick up pet waste	1. Continue to supply bags	Prevent bacteria growth	Ongoing Permanent	Maintain stations and replenish supplies.	City Budget
16	Bacteria Mercury Temperature	NA	City Council review and acknowledgement of TMDL progress reporting	Public Involvement and Participation; Public Education and Outreach	Document date of council meeting for agenda item	Annually for 2023-2027	Coordinate adding agenda for City Council meetings to provided update and document annual and 5 year reports are submitted	Ongoing city business
17	Mercury	Public drainage infrastructure	Update existing map of existing drainage infrastructure and outfalls to reflect current conditions	Internal document review	Updated map showing inventory of publically owned catch basins, dry-wells, channels, and piped systems	Existing map checked and updated by January 2025.	Compile as-built drawings of recent development to contribute to map revision	Funding included in basic operational costs.

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
18	Mercury	Illegal discharge to the stormwater system	Update municipal code to clarify illicit discharges and enforcement	City Council Procedures	Revision to Municipal Code (perhaps existing nuisance code)	Initial discussions with Council in 2023. Draft language for Code revisions in 2024. Code revision vote by Council in 2025.	Draft code revisions prepared and discussed at City Council meeting for public input. Final code language prepared and available for review prior to City Council vote.	Ongoing city business

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
19	Mercury	Requirements for Post Construction and New Development	Update the City's Public Works Design Standards	City Council Procedures	Revision to the City's Public Works Design Standards indicating design criteria	Solicit input from City Planner and Engineer by end of 2024. Identify funding source(s) for the design standards update work by end of 2026. Prepare draft standards revisions and engage planning commission for input on design standards revisions in 2027. Engage City Council in review and approval of standards by end of 2029.	List of import revisions to make prepared. Funding need and source identified. Draft standards prepared. Final standards approved.	To be determined as part of strategy implementation

#	PARAMETER(S) POLLUTANT	SOURCE	MANAGEMENT STRATEGY	HOW	MEASURE	TIMELINE	BENCHMARK	FUNDING
#	What pollutants did the TMDL address?	What sources are under your jurisdiction?	What is being done?	How will this be done?	What is the deliverable?	Start? End? Ongoing?	Mid-term goals? Progress?	How will this be paid for?
20	Mercury	Municipal Code and Design Standards Update	Provide an opportunity for public comments on amendments to municipal code and/or Public Works Design Standards	Public Involvement and Participation	Minutes from public comment periods at Planning Commission or City Council Meetings where code or design standards are discussed.	Concurrent with Items #16 and #17, engage City Council in review and approval of standards by end of 2029.	Post a draft of proposed revisions to municipal code and/or design standards to City websites and organize a date(s) for public comment	Ongoing city business