City of Spokane Valley Stormwater Utility Program Master Plan

DECEMBER 19, 2022

City of Spokane Valley
Stormwater Utility Program Master Plan

Prepared for
City of Spokane Valley
by:

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ACRONYMS AND ABBREVIATIONS

APA	Aquifer Protection Area
BMP	best management practices
Census	US Census Bureau
CIP	capital improvement project
the City	Spokane Valley
City Council	Spokane Valley City Council
CWA	Clean Water Act
E&O	education and outreach
Ecology	Washington State Department of Ecology
ECP	Erosion Control Plan
EPA	US Environmental Protection Agency
ERU	equivalent residential unit
ESA	Endangered Species Act
FWS	US Fish and Wildlife Service
FTE	full-time equivalent
GIS	geographic information system
GMA	State of Washington Growth Management Act
GPS	geographic positioning system
HPA	Hydraulic Project Approval
IDDE	illicit discharge detection and elimination
LID	low-impact development
LOS	level of service
Master Plan	Stormwater Utility Program Master Plan
MS4	Municipal Separate Storm Sewer System
NOAA	US National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
OFM	State of Washington Office of Financial Management
PCB	polychlorinated biphenyl
QAPP	Quality Assurance Project Plan
RCW	Revised Code of Washington
SDWA	Safe Drinking Water Act
SEPA	State Environmental Policy Act
SMA	Shoreline Management Act
SMAP	Stormwater Management Action Plan
SMP	Shoreline Master Program

SRSM	Spokane Regional Stormwater Manual
SSC	stormwater structural controls
SVRP	Spokane Valley Rathdrum Prairie
SVMC	Spokane Valley's Municipal Code
SWMMEW	Stormwater Management Manual for Eastern Washington
SWMP	Stormwater Management Plan
TMDL	total maximum daily load
UIC	underground injection control
UIC Rule	Underground Injection Control Program
UGA	urban growth area
USGS	US Geological Service
WAC	Washington Administrative Code
WSDOT	Washington Department of Transportation

CHAPTER 1. INTRODUCTION AND PLANNING CRITERIA

1.1 City Overview

Spokane Valley is located in Spokane County in eastern Washington, 10 miles west of the Idaho border. Despite having incorporated relatively recently in March 2003, Spokane Valley (referred to throughout this report as either the City or Spokane Valley) is the largest suburb of the city of Spokane and the eighth-largest city in the State of Washington. With a population of approximately 106,000, it comprises nearly a fifth of the population of the greater Spokane metro area, which is roughly 500,000 people. More importantly, the City is growing at a rate nearly twice that of Spokane according to 2022 census data.

According to the US Census Bureau (Census), there are more than 41,000 households in the incorporated city with an average annual household income of just under $70,000. With easy access to the I-90 corridor, the City prides itself on a thriving business climate with access to a highly skilled workforce. Key industries in Spokane Valley include aerospace, agribusiness, distribution and logistics, health care and life sciences, information technology and energy, manufacturing, and professional services.

For outdoor recreation, Spokane Valley residents and visitors have easy access to 20 city parks, local and regional walking and bicycling trails, close proximity to the Northwest Rockies for downhill and Nordic skiing in the winter, and hiking trails and rock climbing in the summer. Golfers have access to nine courses within a 30-minute drive, including one ranked as top-10 in the State of Washington. Common to all these activities is the easy access and spectacular views of the region's streams, lakes, and the Spokane River which runs through Spokane Valley.

Water has always played an important role in the region from early means of transportation on the Spokane River to irrigation of the area's extensive agricultural lands. Underlying the entire region is the Spokane Valley-Rathdrum Prairie (SVRP) Aquifer. The aquifer is the primary source of drinking water for the residents of Spokane Valley as well as others in the surrounding region. Considered one of the most productive aquifers in the country, the aquifer receives more than 90 percent of Spokane Valley's stormwater runoff. The total area of the SVRP Aquifer is approximately 370 square miles underlying two states. **Figure 1-1** shows the SVRP Aquifer and regional waterbodies in relation to Spokane Valley.

Because the City's stormwater systems impact how the aquifer is recharged, knowledge of the stormwater system is important for decision making. The City-owned drainage systems and natural drainage ways are maintained and improved by Spokane Valley's Stormwater Utility. There are over 14,000 drainage assets that are primarily associated with the public road system, which are both owned and operated by the City.

Since Spokane Valley's incorporation in 2003, the City has increasing needs to reassess services and rate structures to accommodate its rapidly growing population, increased regulatory requirements, and aging infrastructure.

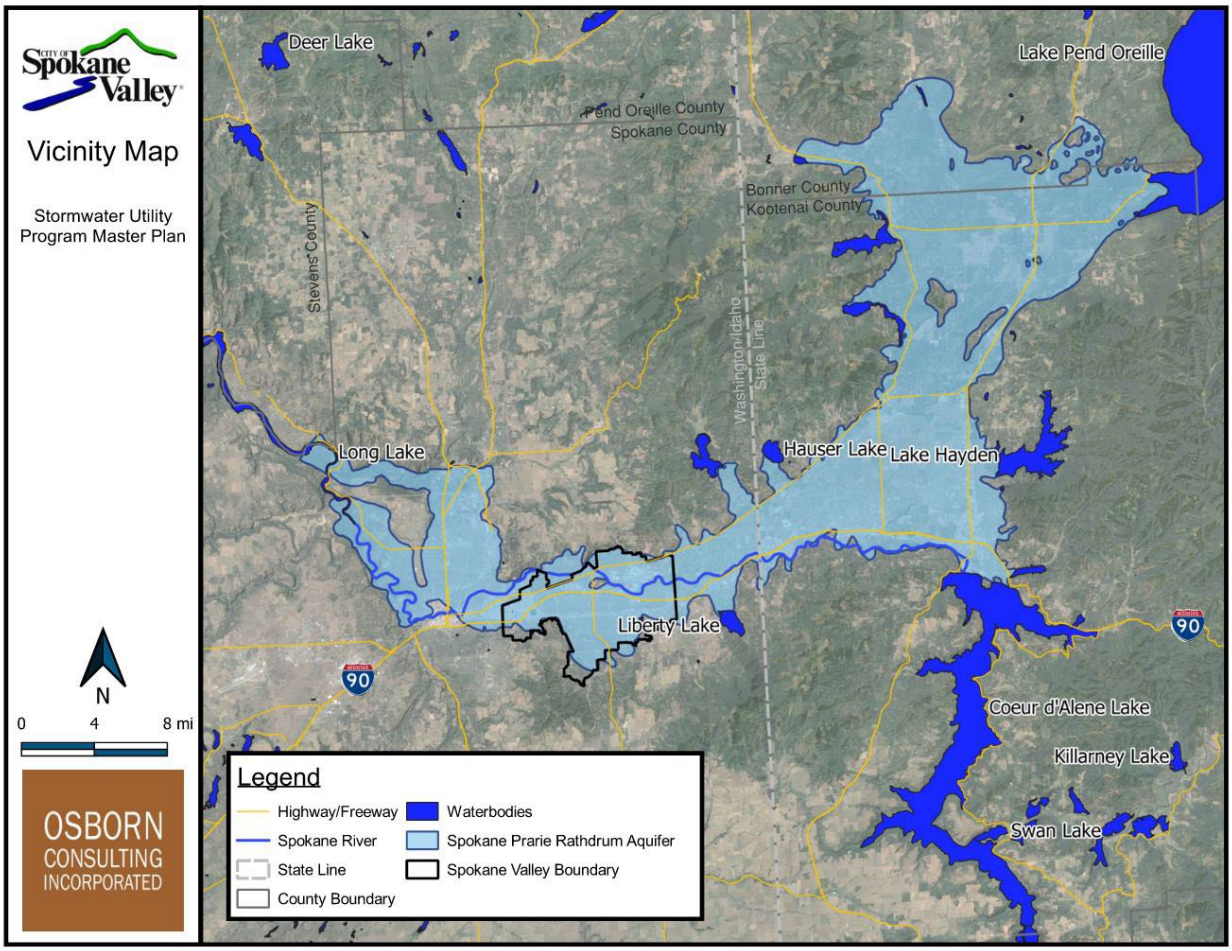
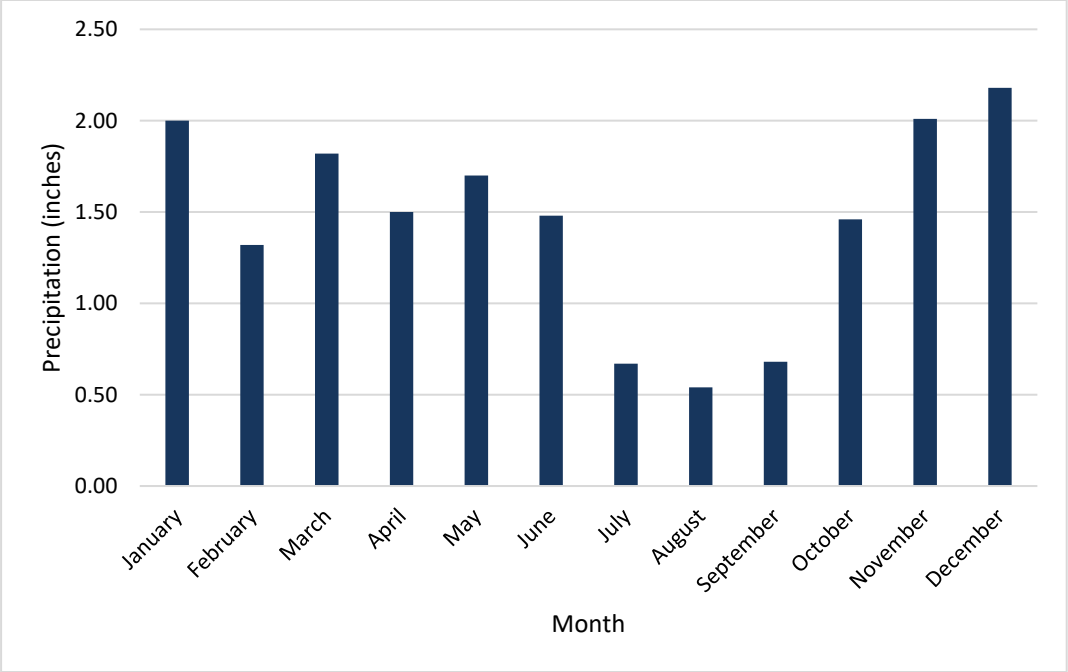


Figure 1-1. Vicinity Map

1.2 Climate

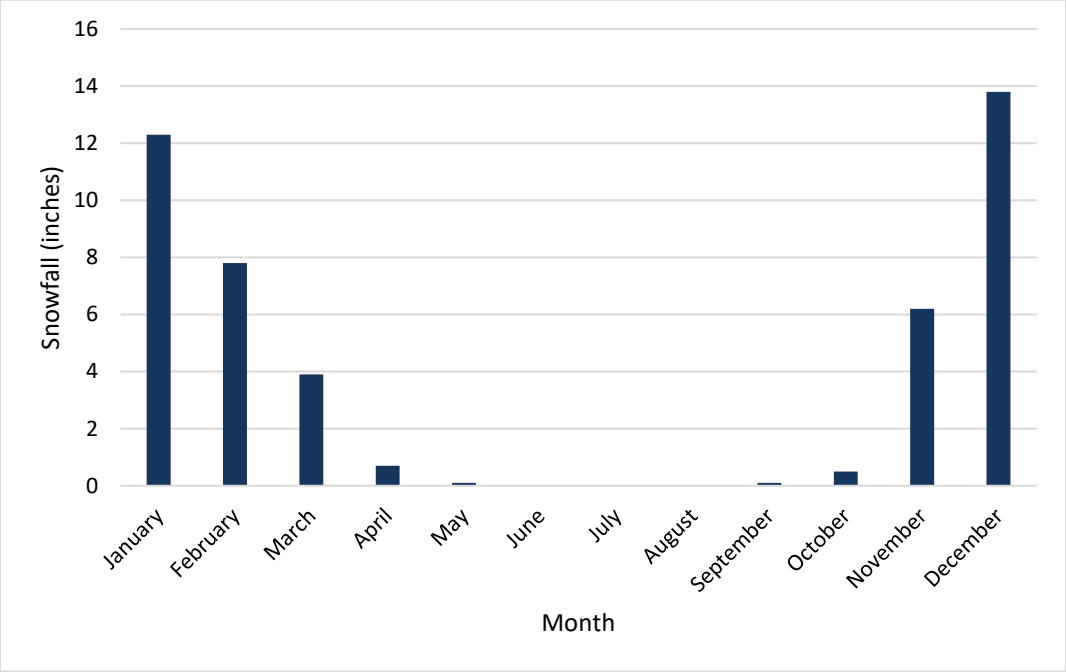
Spokane Valley's climate is classified as semi-arid. Spokane Valley experiences hot temperatures and a dry climate during the summer, but winters are characterized by cold temperatures and freezing weather. Annual high temperatures range from an average of 36.9 degrees Fahrenheit in December to 87.1 degrees Fahrenheit in July. Low temperatures range from an average of 25.7 degrees Fahrenheit in December to 56.0 degrees Fahrenheit in July (NOAA 2021).

Spokane Valley receives an average of 17.4 inches of rain per year. Spokane International Airport, which is adjacent to Spokane Valley, receives 45.4 inches of snow per year. December is the wettest month of the year with an average of 2.2 inches of precipitation. August is the driest month of the year with an average 0.5 inches of precipitation. **Figure 1-2** and **Figure 1-3** show the mean average precipitation and average annual snowfall for Spokane Valley and the Spokane International Airport, respectively, from 1991 to 2020 (NOAA 2021).



Source: NOAA National Centers for Environmental Information. Station: SPOKANE FELTS FLD, WA US USW00094176

Figure 1-2. Mean Average Precipitation of Spokane Valley, Washington (1991 to 2020)



Source: NOAA National Centers for Environmental Information. Station: SPOKANE INTL AP, WA US USW00024157

Figure 1-3. Average Annual Snowfall of Spokane International Airport, Washington (1991 to 2020)

1.3 Land Use

Understanding land use is important in considering surface water impacts as land use directly impacts the rate and quality of the runoff. Spokane Valley is bordered by the cities of Millwood to the north, Liberty Lake to the east, Spokane to the west, and unincorporated Spokane County to the south. Spokane Valley is an urbanized area consisting of a mix of residential, industrial, and commercial land use areas encompassing an area of approximately 38 square miles (Census 2021). Land use is shown graphically on **Figure 1-4** and summarized in **Table 1**.

Significant waterbodies in Spokane Valley include Shelley Lake, Chester Creek, and the Spokane River, which flows west through the City. The Spokane River flows east to west from Lake Coeur d'Alene to the Columbia River.

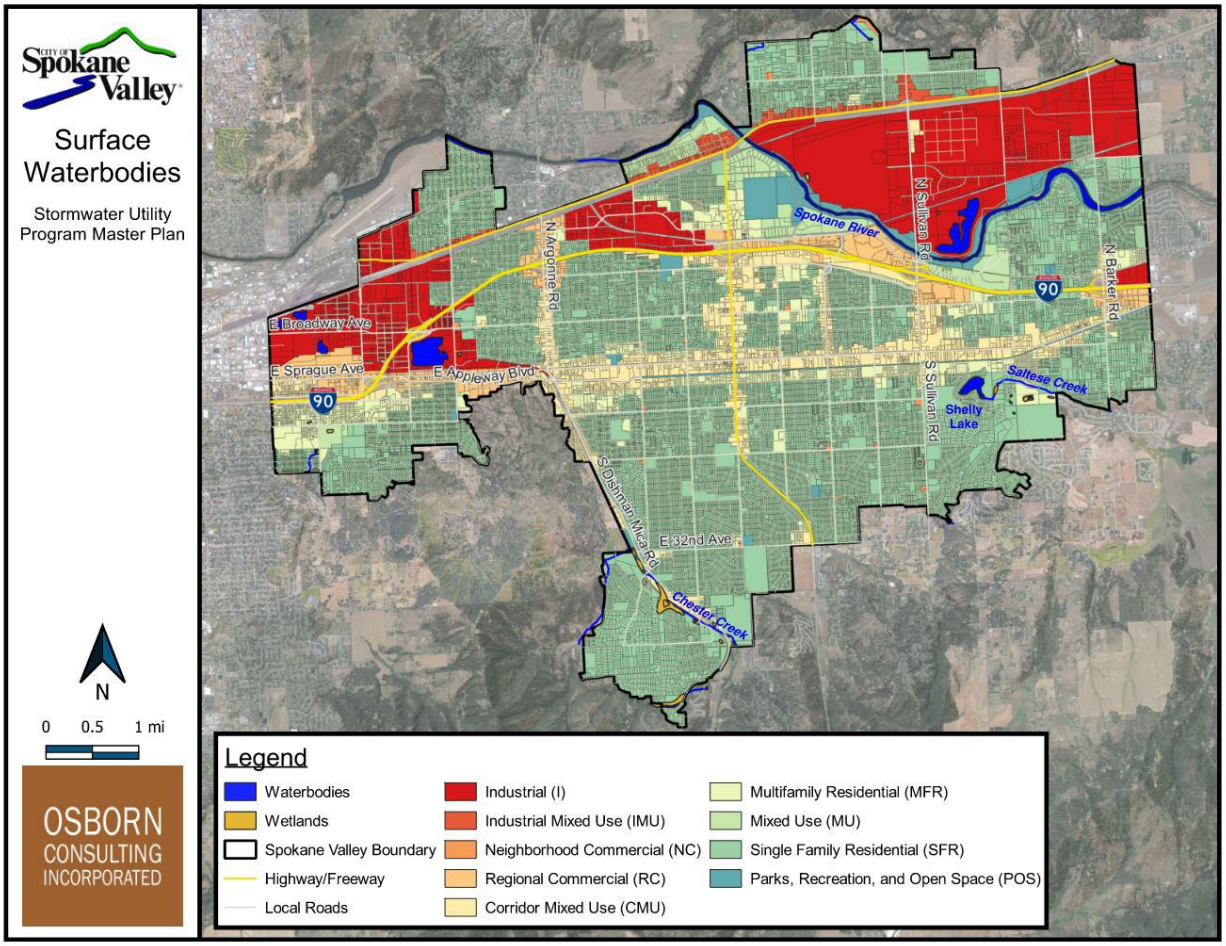


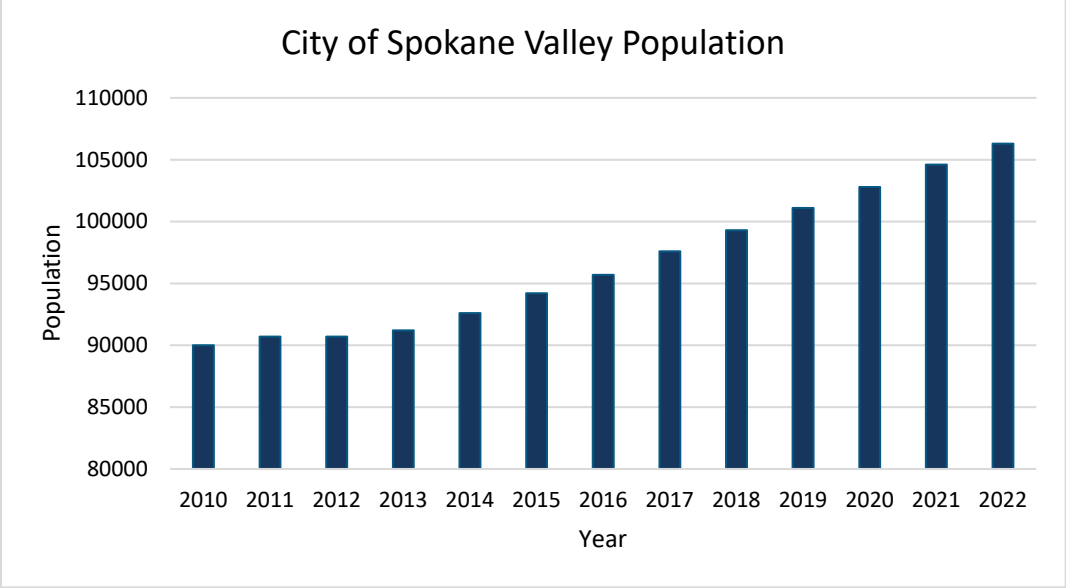
Figure 1-4. Surface Waterbodies in Relation to Land-Use Type

Table 1. Land Use Type in Spokane Valley

Zoning	Area (%)
Single Family Residential	54
Parks, Recreation, and Open Space	3
Corridor Mixed Use	8
Regional Commercial	4
Neighborhood Commercial	< 1
Industrial	20
Multifamily Residential	7
Industrial Mixed Use	1
Mixed Use	3
Total	**100**

1.4 Population Growth

The World Population Review estimates the 2022 population of Spokane Valley at approximately 106,000 people, making it the eighth largest city in the State of Washington. As depicted on **Figure 1-5**, Spokane Valley's population has increased by about 16,000 people since 2010, an 18.07 percent increase (World Population Review 2022).



Source: World Population Review (2022)

Figure 1-5. City of Spokane Valley Population Growth from 2010 to 2022

According to research conducted by the State of Washington Office of Financial Management (OFM), the population of Spokane County is projected to continue growing at a rate of over 18 percent through 2040 **(**OFM 2022). Assuming a similar rate, the City population is predicted to reach over 200,000 by 2040.

1.5 Summary of the Utility and Existing Funding

The City owns, operates, and maintains a Stormwater Utility to manage stormwater within the City limits, which includes infrastructure governed by the Municipal Separate Storm Sewer System (MS4) Phase II Permit as well as the Underground Injection Control (UIC) Program (UIC Rule) governed by Section 218 of Chapter 173 of the Washington Administrative Code (WAC 173-218). The Stormwater Utility is

responsible for meeting stormwater regulatory requirements and standards, maintaining and operating the utility facilities, and implementing small works and capital improvement projects to reduce erosion, and increase flow control capacity and water quality protection. Regulatory requirements and standards, operations and maintenance, and Stormwater Utility systems and programs are discussed in detail throughout the following chapters of the Stormwater Utility Program Master Plan (Master Plan).

The Stormwater Utility relies on two distinct sources for funding. The first source is the City of Spokane Valley Stormwater Utility fee, charged to individual property owners. Currently, the fee is charged to individual parcels within the City based on the area of impervious surface. Residential properties in the Spokane Valley pay a flat fee of $21.00 annually per dwelling unit, which is imposed uniformly on single family residences, duplexes, triplexes, and fourplexes. All other developed properties (commercial, industrial, etc.) are charged $21.00 annually for every 3,160 square feet of impervious surface area, which is the average amount of impervious surface area on a single-family lot.

The second source of funding is by establishment of a Spokane County Regional Aquifer Protection Area (APA) fee. Currently, household units are charged a fee ($1.25 per month) for the withdrawal of water. Non-household units are imposed a fee for withdrawal of water based on water meter size. The current APA establishment and imposed fees sunset November 2, 2024. At that time, the APA will be placed before regional voters to reauthorize the APA for another 20-year term.

The Stormwater Utility rate and the APA fee are expected to generate approximately $1.9 million and $450,000, respectively, in 2022. Due to new and increased requirements of the MS4 Permit and the UIC Rule and updated projections of customer and development growth, the Master Plan and its proposed rate increase is needed to develop a sustainable plan and rate for the City's Stormwater Utility Program.

1.6 Purpose and Objective

The primary goals of the Master Plan are the following:

- Establish a plan for the Stormwater Utility to efficiently manage the Capital Improvement Programs, operation and maintenance (O&M) programs, UIC retrofit plan, and level of service (LOS) of the Stormwater Utility.
- Evaluate current staffing and LOS to identify gaps between required and recommended LOS and staffing levels.
- Evaluate expenses and projected future surface water management fees to ensure the financial viability of the Stormwater Utility.

1.7 Planning and Review

Work on the Master Plan began in May 2022. The City retained a consultant team consisting of Osborn Consulting, Incorporated, FCS Group, and Evergreen StormH2O for technical assistance. The public's input was recruited through several activities; a public open-house meeting, an online comment period, a community rate survey, and a presentation to the Spokane Valley City Council (City Council) were held during the Master Plan development process. The meetings sought to receive public and City feedback about the progress of the Master Plan development, rate design alternatives, and proposed rates. During the online public comment period, education and outreach (E&O) materials were developed to inform the public about stormwater rate increases and the Master Plan and rate study. Table 2 summarizes the timeline of the process.

1.7.1. Public Outreach and Engagement

Public input on the Master Plan was gathered in a variety of formats through several events including public meetings and survey, State Environmental Policy Act (SEPA) public comment, and City Council meetings and reports. The following section describes the public involvement processes conducted by City staff and the consultant team.

1.7.1.1. Public Online Comment and Outreach:

A 3-week online comment period was hosted on the City's public website from October 11 through November 3, 2022. The website provided information explaining the purpose of the Stormwater Utility, the Master Plan and rate study, and proposed rates. A public survey was offered for citizens to comment on the desired LOS and associated Stormwater Utility rates. These materials were posted on a variety of media sites by the City, such as Facebook, Instagram, and Twitter. Materials associated with this effort and public response can be found in **Appendix A**.

1.7.1.2. Public Open-House Meeting:

On October 20, 2022, an open house was held at the Spokane Valley City Hall to engage the community about the project's status and obtain feedback on the proposed changes to stormwater fee rates. The event was announced to the community in the local newspaper on October 12, 2022, and sent directly to more than 1,500 citizens via City news subscription. The open house, which included educational stations and an option for residents to participate in the online survey, had approximately 10 Spokane Valley residents in attendance. The consultant team and City staff were present to answer questions and engage with community members.

1.7.1.3. State Environmental Policy Act Public Comment Period

Formal public comments were solicited through the 14-day SEPA comment period. The SEPA comment period opened on September 30 and closed on October 14, 2022. Comments were received and compiled by the consultant team. See **Appendix B** for the SEPA checklist, citizen and agency comments, and comment responses.

1.7.1.4. City Council

Stormwater Utility staff prepared reports and presented to the City Council three times during the planning process for the Master Plan. Reports were provided prior to City Council meetings to allow council members to familiarize themselves with the planning process before the public meeting. The City Council meetings provided council members an opportunity to voice their concerns and offer direction for the Master Plan. The following provides a summary of the reports and meetings held for the City Council:

City Council Admin Report 1: On October 4, 2022, City staff provided a consolidated briefing to update the City Council on planning efforts for the Master Plan.

City Council Meeting 1: On October 25, the draft Master Plan and rate study results were presented to the City Council by City staff and the consultant team. Recommendations for LOS and associated rate increases were discussed during this meeting.

City Council Master Plan and Rate Study Adoption: On November 8, 2022, the City Council adopted the updated rates associated with the Master Plan and rate study.

Table 2. Process for Master Plan and Rate Study Development and Review Timeline

Date	Timeline of Events
May 2022	Consultant team awarded contract to support the City with development of a Stormwater Master Plan after competitive selection
October 20, 2022	Public open house hosted by City staff and consultant team
October 11 to November 3, 2022	Online public comment period to obtain public feedback
October 25, 2022	City Council Meeting to discuss the revenue requirements identified during the study and rate design alternatives and proposed rates
November 28, 2023	Rates associated with Master Plan and rate study approved by City Council
December 2022	Final Master Plan and rate study complete
January 2023	Updated rate Information included in 2023 property tax notifications

CHAPTER 2. REGULATORY REQUIREMENTS AND POLICIES AND PROCEDURES

The City of Spokane Valley's Stormwater Utility Program is subject to federal, state, and local regulatory requirements as well as local policies and procedures. This chapter of the Master Plan is organized by applicable regulatory categories and the requirements within each category. Each requirement (or policy or procedure) includes a description, a brief summary of how it impacts the City's Stormwater Utility, and, if applicable, information about how the item was used for this study. Many of these regulations and polices are connected and related to each other as federal requirements are handed down to the state and local levels.

2.1 Federal Requirements

2.1.1. Clean Water Act

The Clean Water Act (CWA) was enacted in 1972, which designated the US Environmental Protection Agency (EPA) with the authority to implement programs and develop national water quality standards for pollutants in surface waters. With the CWA, the EPA aims to restore the beneficial uses of our nation's waters. The CWA was expanded in 1987 into two phases, the second of which applies to the City. As part of the second phase (Phase II), the City's stormwater point source discharges to national surface waters are regulated by the Washington State Department of Ecology (Ecology) on behalf of the EPA. The National Pollutant Discharge Elimination System (NPDES) Permit.

2.1.2. Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was enacted in 1974, with the goal of protecting public health by regulating the drinking water supply nationwide through the EPA (EPA 2022). The City is required to comply with the SDWA, specifically with UIC drywells (explained in greater detail in **Section 5.1.1**) and the City's proximity to the SVRP aquifer. In 1978, the EPA designated the SVRP aquifer as a sole-source aquifer; it is the sole source of drinking water for most of the population in Spokane County, Washington, and Kootenai County, Idaho (Spokane County 2022). The SDWA provided the framework for the UIC Rule which protects underground sources of drinking water (Ecology 2006). Ecology was authorized to manage the UIC Rule in 1984. See **Section 2.2.2** for more details about the UIC Rule.

2.1.3. Endangered Species Act

Enacted in 1973, the Endangered Species Act (ESA) was established to protect fish, wildlife, and plants that are listed as threatened or endangered. The ESA is implemented by the US Fish and Wildlife Services (FWS) and the US National Oceanic and Atmospheric Administration (NOAA) Fisheries Services, which holds other federal agencies responsible for ensuring actions authorized or funded will not jeopardize the existence of, or destruct critical habitat for, any listed species (EPA 2022b). The ESA was considered during the development of the draft State Environmental Policy Act (SEPA) checklist for the Master Plan. There are occurrences of listed threatened or endangered species within City limits, as per question B4.c. & B.5.b. of the SEPA checklist (**Appendix B**). Federally listed species which may occur within City limits include the following:

- *Silene spaldingii* (Spalding's catchfly)
- *Coccyzus americanus* (yellow-billed cuckoo)
- *Danaus plexippus* (monarch butterfly)
- Salvelinus confluentus (bull trout)

Although the Master Plan will not directly affect any ESA listed species, projects prioritized in the Master Plan may inadvertently benefit these species and habitats. Refer to the SEPA Checklist in **Appendix B** for further detail on ESA-listed species.

2.2 State Requirements

2.2.1. Phase II Permit – Municipal Separate Storm Sewer System

Ecology administers the Eastern Washington Phase II MS4 Permit, which allows the City to discharge stormwater to waters of the state. The MS4 Permit applies to both point discharges and potential overflow[1] from UICs that could discharge to the MS4 and outfall to receiving waters. The MS4 Permit is typically issued in 5-year cycles. The current MS4 Permit is in effect through 2024 and the next permit will be issued for 2024 through 2029. The Phase II MS4 Permit is intended to meet the requirements of the NPDES per the CWA and is combined with the State of Washington Waste Discharge General Permit, which regulates discharges to waters of the state, including discharges to municipal sewerage system. The MS4 Permit was used to conduct a gap analysis of the City's stormwater management program as described in **Chapter 3** .

2.2.2. Underground Injection Control Program Rule (WAC 173-218)

The UIC Rule protects groundwater quality by regulating discharge of fluids into UIC wells to meet the goals and standards of Part C of the SDWA and the State of Washington's Water Pollution Control Act (Chapter 90.48 of the Revised Code of Washington [RCW]). The City has more than 7,600 UICs in the Stormwater Utility, which are subject to the UIC Rule and regulated by Ecology. Section 5.6 of the Stormwater Management Manual for Eastern Washington (SWMMEW) defines site suitability, treatment requirements, and design criteria for discharge of stormwater to new UIC wells as well as the well assessment and retrofit requirements for existing UIC wells (Ecology 2019). For this Master Plan, the UIC Rule was used as guidance during the gap analysis described in **Chapter 4** to assess the City's compliance. It was also used for the development and estimation of the UIC Retrofit Program described in **Section 5**.

2.2.3. Total Maximum Daily Load Listing

The Spokane River is one of the few surface waterbodies within the City boundaries. The river is currently listed in Ecology's Water Quality Atlas as a Category 5 waterbody for polychlorinated biphenyls (PCBs) and has outstanding total maximum daily loads (TMDLs) for dissolved oxygen and dissolved metals. However, the City removed the last point discharge outfall to the river in 2015 and no TMDLs currently apply to the City (Spokane Valley 2022).

2.2.4. Shoreline Management Act (RCW 90.58)

The Shoreline Management Act (SMA) was codified by the State of Washington Legislature in 1971 with the intent to protect, restore, and preserve state shoreline areas to the greatest extent feasible (RCW 90.58). The SMA also seeks to maximize coordinated planning efforts for public and private development on shorelines of the state. The SMA establishes a cooperative program for shoreline management between local governments and the state, granting primary responsibility for initiating shoreline planning efforts to local governments. The SMA governs the City's Shoreline Master Program (SMP), described in **Section 2.3.2**, and is administered by City staff outside of the Stormwater Utility.

2.2.5. National Flood Insurance Program and Floodplain Management (RCW 86.16)

Spokane Valley's Municipal Code (SVMC) Section 21.30 includes provisions for administering floodplain regulations in conformance with the National Flood Insurance Act of 1968. This act establishes the National Flood Insurance Program, which is governed by Ecology in the State of Washington. This program is currently administered through City staff outside of the Stormwater Utility and is funded through permit and development review fees.

[1] This refers to the larger volume of runoff generated from a 100-year, 3-hour storm, or a 100-year, 72-hour storm. The 100-year event refers to the runoff generated by hydrologic events that have a 1 percent probability of occurring in any given year based on historical events and frequency analysis. It is used in an attempt to predict worst-case scenarios for stormwater discharges.

2.2.6. Hydraulic Project Approval (State Hydraulic Code RCW 77.55)

A Hydraulic Project Approval (HPA) Permit is required of any person or government agency that proposes a hydraulic project. The permit requires that the applicant document the adequacy of the means proposed to protect fish life for the duration of the project's construction work. An HPA is required for construction of any new stormwater discharges or outfalls; however, work on existing outfalls covered by the MS4 Permit may not require an HPA. This requirement would apply to new stormwater outfall discharges proposed to be constructed as part of a CIP or other project associated with this Master Plan.

2.2.7. State Environmental Policy Act

SEPA requires that an environmental review be conducted via SEPA checklist and a threshold determination be made for development within the City limits, unless activities are exempt. A draft SEPA checklist was prepared for the Master Plan; however, upon further City staff review, the Master Plan and Rate Study were determined to be exempt from SEPA based on WAC 197-11-800(19) and WAC 197-11-800(14)(i).

2.3 Local Requirements

2.3.1. Urban Growth Area/Management

Urban growth areas (UGAs) within the City are defined by the City's currently adopted Comprehensive Plan (Spokane Valley 2016), in accordance with the State of Washington Growth Management Act (GMA). In 1990, the GMA was codified through RCW 36.70A, with the intention to prevent unplanned and uncoordinated growth by establishing comprehensive plans, which also require protection of critical areas, encourage urban growth within UGAs, and outline capital improvement development projects. Comprehensive plans developed in accordance with the GMA also establish goals, policies, strategies, and requirements for stormwater management. The existing UGA was not used as part of this rate study but should be considered for future rate increases if more area is annexed into the City and the City's service area grows. The UGAs for the City of Spokane Valley can be seen in **Appendix C**.

2.3.2. Shoreline Master Program

The City finalized its SMP in 2015, which established goals, policies, and regulations related to shoreline development (Spokane Valley 2014). The SMP is reviewed and revised on an 8-year schedule, in compliance with the SMA as described in **Section 2.2.4**. The SMP was most recently reviewed in February 2021 resulting in a SEPA determination of non-significance. The SMP applies to the Stormwater Utility at all locations where the MS4 outfalls to the Spokane River and would apply to all stormwater outfall assessments and reviews.

2.3.3. Spokane Valley Street Standards

The Spokane Valley street standards are published by the City and were most recently revised in 2018. The street standards define the minimum acceptable standards for both design and construction for any street or street-related improvement and associated stormwater drainage design work within the City limits. The street standards were assessed as part of the gap analysis described in **Chapter 4** and the prioritization and estimation of stormwater CIP and UIC retrofit costs described in **Chapter 5**.

2.3.4. Spokane Regional Stormwater Manual

The Spokane Regional Stormwater Manual (SRSM) was developed jointly and published in 2008 by the cities of Spokane and Spokane Valley, and Spokane County. The intent of the document is to establish stormwater management design standards and maintenance criteria for new development, redevelopment, and capital projects in the Spokane region. The City follows the 2008 SRSM for all projects affecting the Stormwater Utility. Ecology had approved the SRSM as equivalent to the MS4 Eastern Washington Phase II Permit Appendix 1 and the City is currently working with the other Spokane jurisdictions to update the equivalency to meet the 2019-2024 MS4 Permit. The SRSM was reviewed as part of the gap analysis and LOS evaluation described in **Chapter 4** and the prioritization and estimation of stormwater CIP and UIC retrofit costs described in **Chapter 5**.

2.3.5. Stormwater Management Manual for Eastern Washington

The SWMMEW was most recently revised in 2019. The manual provides guidance for stormwater permit implementation and management (Ecology 2019). The SWMMEW was used during the gap analysis and the development of the UIC Retrofit Program as described in **Chapter 4** and **Chapter 5**, respectively.

2.3.6. Stormwater Management Regulations

SVMC Chapter 22.150 specifically addresses stormwater management regulations for all projects and processes in the City. This chapter of the SVMC serves four primary purposes:

- Establish priority policies and procedures to reduce negative impacts to surface and groundwater quality
- Minimize impacts of increased surface flow volumes caused by property development
- Promote site planning that preserves hydrologic conditions
- Protect and maintain public and private properties dedicated for stormwater management

This chapter in the code was assessed as part of the gap analysis and LOS evaluation described in **Chapter 4** and the prioritization and estimation of stormwater capital improvement project costs described in **Chapter 5**.

2.3.7. Critical Areas

Critical Areas designations exist to identify and classify areas on public or private property that are deemed environmentally sensitive, and hazardous areas that require protection, maintenance, or restoration to regain proper function. Chapter 21.40 of the SVMC addresses critical areas. Critical areas regulations allow for exemptions and define requirements for existing and proposed stormwater management and outfalls within critical areas or their defined buffers.

CHAPTER 3. STORMWATER MANAGEMENT PROGRAM, APPROACH, AND LEVEL OF SERVICE GOALS

This section provides an overview of the City's existing Stormwater Utility including an organization chart of stormwater staff, stormwater elements that make up the Stormwater Utility, and the City's approach to stormwater management and respective LOS goals for operating and maintaining the stormwater system.

3.1 City Utility Staff Organization

Stormwater services that are programmed into the Stormwater Utility budget are provided by 4.13 full-time equivalent (FTE) employees who primarily work in the Community and Public Works Department. Additional services that support the utility but are not programmed into the budget (non-programmed) are provided by approximately 1.49 FTE employees and are described in **Section 4.3**. An organizational chart of programmed staff is shown on **Figure 3-1**.

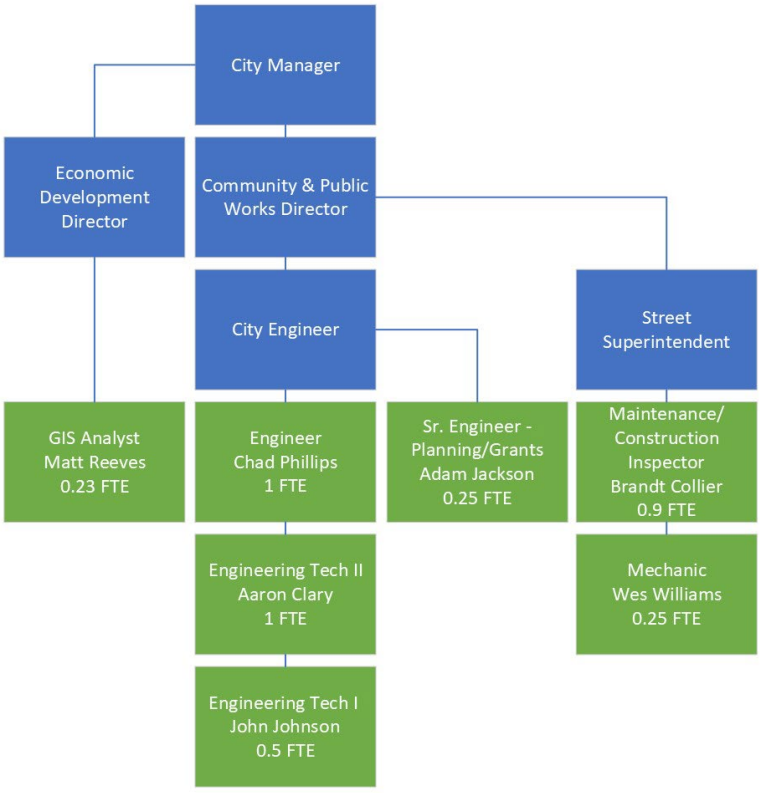


Figure 3-1: Organization of Staff Currently Programmed into the Stormwater Utility Budget

3.2 Stormwater Utility Program Elements

The City's stormwater program can be separated into two primary categories: stormwater elements not regulated and stormwater elements regulated. For stormwater elements that are regulated, the two primary regulations that apply are the MS4 Eastern Washington Phase II Permit and the UIC Rule. Each stormwater element is identified and defined in this section and organized by the primary categories.

3.2.1. Stormwater Elements Not Regulated

This category includes activities that generally are not conducted to directly meet regulatory requirements.

3.2.1.1. Maintenance Coordination and Support

Maintenance coordination and support includes the time stormwater staff spend coordinating with and supporting maintenance staff. Activities may include communicating with maintenance staff regarding work identified through Q-Alert (the City's software system for tracking issues), which could include infrastructure repairs or replacement; illicit discharge detection and elimination (IDDE) cleanup; weed control; maintenance repair design; GPS tracking support of City-owned trucks; and other similar practices.

3.2.1.2. Operation and Maintenance Management

Managing O&M activities includes miscellaneous drainage activities that are not coordinated with City maintenance, such as Chester Creek annual cleanup and vegetation management, and inspecting best management practices (BMPs) on public and private construction projects.

3.2.1.3. Stormwater Service Contract Support

Stormwater service contract support includes work associated with managing and planning for vendors with service contracts. Service contracts are used for the following tasks:

- Street sweeping
- Storm drain cleaning
- Landscape activities
- Emergency cleanup, including emergency spill cleanup
- Emergency traffic control
- Weed spraying
- Vegetation management

3.2.1.4. Development Services Coordination and Support

Development services coordination and support is provided by the development engineering staff who are responsible for review and inspection of private development. This work typically involves providing technical information and assistance related to stormwater.

3.2.1.5. Stormwater Capital Improvement Program

The comprehensive stormwater Capital Improvement Program plan includes identification of projects, design and construction of projects, and grant administration if projects are grant funded. This program is discussed in greater detail in **Chapter 5**.

3.2.1.6. Citywide Capital Improvement Program Coordination and Support

The Citywide Capital Improvement Program for non-stormwater capital projects includes the coordination and support involved in identifying partnering opportunities to resolve known drainage issues or to retrofit drywells within proposed project limits. These opportunities are identified in the project recommendations packet that stormwater staff develop for applicable proposed projects. This element also includes providing technical support during the design phase and review of the drainage aspects of design/construction projects for partners.

3.2.1.7. Small Works Program

Projects in the Small Works Program are a result of issues identified through the City's Q-Alert system. The projects are developed and implemented to mitigate citizen complaints or maintenance issues.

Projects completed through this program are required to be less than $300,000. The work completed by City staff for these projects includes the following:

- Identification of projects
- Design
- Plans, specifications, and cost estimate development
- Construction management
- Post-construction inspection

3.2.1.8. Citizen Complaints Response

This program element includes time for City staff to manage the Q-Alert program, including collecting citizen complaints, conducting field investigations, evaluating the City response (from a do-nothing approach to field modifications), developing a plan for response, and implementing the plan.

3.2.1.9. Geographic Information System Asset Management/Webpage/Mapping Management

Management of the City's geographic information system (GIS) includes mapping of stormwater assets and maintaining the GIS web page and mapping tools. This work includes data collection in the field and uploading information from reports into GIS, developing maps to help guide planning and design, and tracking completed maintenance activities, when needed. Efforts to update GIS data as required per the MS4 Permit described in **Section 4.2.2**.

3.2.1.10. Program Management, Policy, and Procedures Development

This program element includes developing and managing policies and procedures that support the Stormwater Management Program and improve overall efficiency and consistency for the City's stormwater utility.

3.2.1.11. Utility Locates

Utility locates includes all work associated with locating stormwater utilities. This is conducted primarily for developer projects.

3.2.1.12. Grant Research Development Administration

Grant research development administration involves all time the City or a consultant spends to develop a grant application, provide grant administration, and develop the funded project design and construction packages.

3.2.1.13. Regulatory Compliance Administration

Activities associated with evaluating and identifying UIC vs. MS4 areas as well as developing, implementing, and updating a plan for managing the areas. These activities are associated with separating the two areas and developing a unique UIC Stormwater Management Plan (SWMP).

3.2.2. Stormwater Elements Regulated

This category includes activities conducted to directly meet regulatory requirements. Specific details about these requirements are discussed in more detail in **Chapter 4**.

3.2.2.1. MS4 EWA Phase II Permit Requirements

Activities that support managing the MS4 as required by the Eastern Washington Phase II Permit which are described in the City's MS4 SWMP.

3.2.2.2. UIC Rule Requirements

Activities that support managing the City's UICs as required by the UIC Rule and described in the City's UIC SWMP. This includes development, implementation, and management of the UIC Retrofit Program as described further in **Section 5.3**.

3.3 Stormwater Management Plan Approach: MS4 versus UIC

The City is required to develop a SWMP that outlines how they plan to comply with their MS4 Permit and the UIC Rule. Per the SWMMEW, MS4 Permittees have three options for their SWMP: 1) develop a single SWMP that complies with the MS4 Permit for areas serviced by municipal UIC wells; 2) in areas not covered by the MS4 Permit, create a SWMP specifically for UIC wells owned by the municipality; or 3) if the municipality chooses not to develop a SWMP in areas served by UICs, they may instead develop a Stormwater Site Plan for areas served by each UIC well. The City has been developing and following a single SWMP that complies with the MS4 Permit for their entire geographical area including areas served by municipal UICs that are outside the MS4 areas. In January 2021, however, the City submitted a draft UIC SWMP to Ecology that declared the City's departure from full jurisdictional coverage under the MS4 Permit. Currently the City is transitioning to having two separate SWMPs: an MS4 SWMP and a UIC SWMP. A Citywide hydraulic model being developed by the City will finalize this transition by clarifying and confirming the MS4 regulatory areas. **Figure 3-2** shows a draft of geographical areas within the City by regulatory type: MS4, UIC regulated, or under review. Areas under review will be updated with the results of the final hydraulic model which is expected to be complete in early 2023.

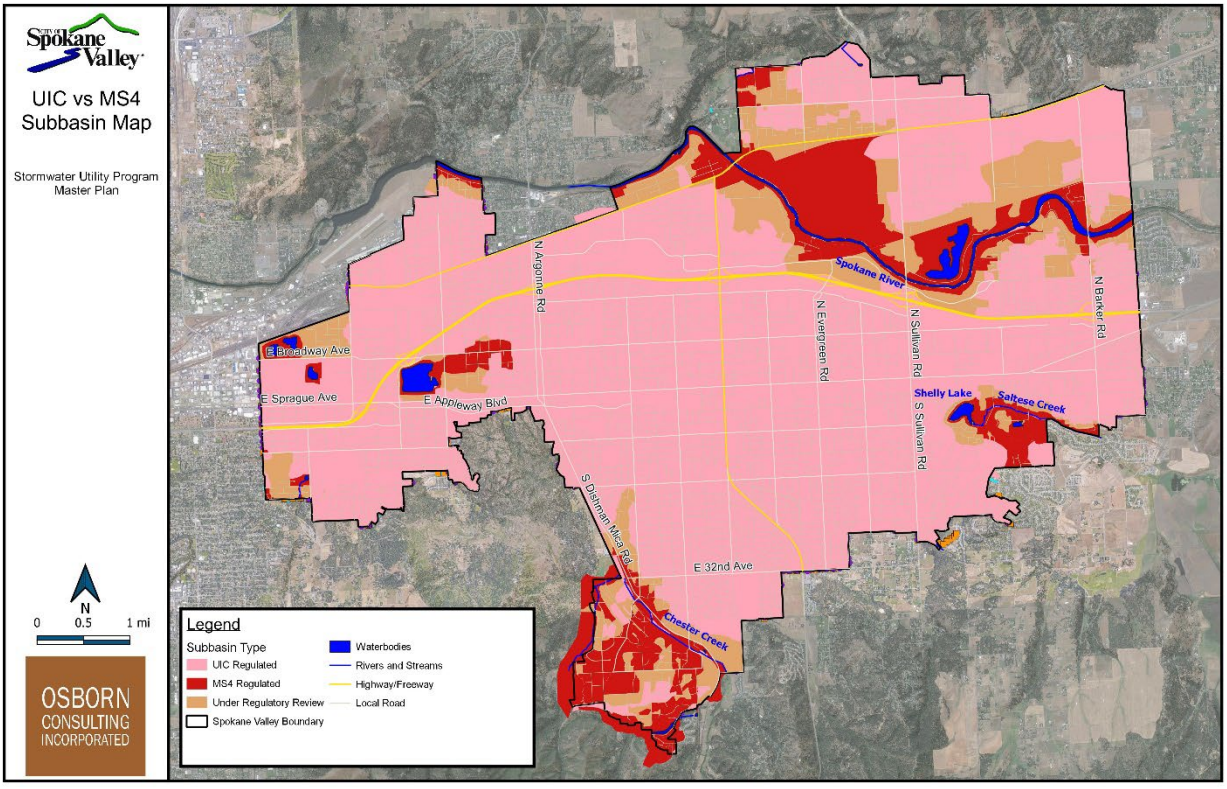


Figure 3-2. Sub-Basin Map Indicating Stormwater Management Approach (UIC versus MS4)

As shown on **Figure 3-2** approximately 75 percent of the City's geographic area is outside the MS4 regulated area. The area covered by the MS4 Permit includes 31 point-source outfalls and 23 non-point sources that discharge to regulated receiving waters. However, the City has 7,600 UICs, the majority of which are outside the MS4 regulated area. For these reasons, the City has elected to develop two separate SWMPs. Developing a separate UIC SWMP will allow the City to take a more agile and less

prescriptive approach to creating a UIC program that meets the City's needs. Current stormwater program costs related to UICs would likely be reduced by eliminating MS4 Permit requirements that do not directly pertain to the City. Instead, the City would prefer to use the funds saved by separating the MS4 and UIC stormwater programs to build a more robust and proactive UIC Retrofit Program, thus improving the water quality of UIC discharges to the aquifer. The proposed UIC Retrofit Program is detailed in **Section 5.3**. A separate UIC program would also provide flexibility with O&M requirements by allowing the City to dictate maintenance and inspection frequencies that better suit the regional climate and environment. Finally, developing a separate UIC SMWP will limit the City's liability because the MS4 Permit has a third-party lawsuit provision that does not exist with the UIC Rule.

3.4 Level of Service Goals

Goals for LOS are a measure of the type of actions provided by the City to maintain the operation of the Stormwater Utility at an acceptable level. LOS goals provide an understanding between stormwater funding needs with respect to the services provided. Working with the City, LOS goals were categorized into three primary tiers: Existing, Minimum Required, and Proactive. These tiers are described further below. **Chapter 4** describes how all existing and planned stormwater activities related to each stormwater element were categorized into the different LOS tiers. This categorization was then used to estimate the resources needed to support the Stormwater Utility element to its respective goal. **Chapter 5** outlines the CIPs and UIC Retrofit Program options in accordance with the three LOS goals. **Chapter 6** uses the information from Chapters 4 and 5 to develop revenue requirements for each of the different LOS goals.

- **Existing** – Current services that support the Stormwater Utility which can be further broken down into two categories:
  - Existing Programmed – Services funded by the existing Stormwater Utility budget.
  - Existing Non-Programmed – Services not funded by the existing Stormwater Utility budget.
- **Minimum Required** – Efforts required to meet the Existing tier plus any additional efforts needed to meet the minimum regulatory requirements (both current and anticipated). For items not regulated, Minimum Required refers to the efforts needed to keep stormwater infrastructure functional.
- **Proactive** – Efforts required to meet the Minimum Required tier plus additional efforts that support the City in taking a more proactive approach to manage stormwater that would:
  - Improve water quality and hydrology to receiving waters
  - Replace aging infrastructure to reduce future O&M costs and avoid costly emergency repairs
  - Streamline existing processes

CHAPTER 4. GAP ANALYSIS OF STORMWATER UTILITY PROGRAMS

A gap analysis was performed to assess the City's compliance with regulatory requirements along with the City's LOS goals. The process consisted of developing a compliance checklist based on the MS4 Permit and the UIC Rule and then comparing it to the City's existing stormwater activities. Elements of the City's Stormwater Management Program that are not regulated were outlined by the City based on their LOS goals. Through this process, program gaps were identified, recommendations for improvement were made, and an estimate was developed of the City resources required to be compliant with the MS4 Permit and UIC Rule while meeting the City's LOS goals. The following sections describe the process and results of the gap analysis, as well as recommendations for an improvement plan.

4.1 Level of Service Goals for Stormwater Utility Program Elements Not Regulated

For each Stormwater Utility program element summarized in **Section 3.2** that is not regulated, the City defined their activities associated with the LOS goal. A summary of the activities associated with each LOS goal is included in **Appendix D**. The City's Existing LOS activities (definitions of Existing, Minimum Required, and Proactive are found in **Section 3.4**) were then compared to the Minimum Required LOS activities to identify elements where the City should make improvements. For most elements, the City's Existing activities meet or exceed the Minimum Required except for the following elements.

- **O&M Management** – Currently the City uses Geiger Corrections Center Work Crews to provide annual cleanup, vegetation management, and maintenance requirements at Chester Creek. Since Geiger Corrections Center Work Crews will no longer be providing these services, the City will need to provide resources to complete this work. Resource estimates have been included in **Section 4.3** under Minimum Required for this additional work.
- **Stormwater Utility Locates** – The City's Existing LOS does not include providing services for the Stormwater Utility to satisfy requirements of RCW 19.122 Underground Utilities. However, recent changes to Utility Locate Requirements have increased the Minimum Required for this work. The current Minimum Required assumes City staff FTE allocation for setting up a service contract to locate utilities and update mapping to confirm all stormwater features are included in the City's GIS database. Resource estimates have been included in **Section 4.3** under Minimum Required for this additional work.
- **Regulatory Compliance Administration** – The majority of this stormwater element is covered under the MS4 Permit and the UIC Rule gap analysis. There are two items that are not explicitly required as part of this element:
  - **Update the UIC SWMP** – As noted in Section 3.3, the City is in the process of creating a UIC SWMP. This is not required by the UIC Rule; however, it is an option for Permittees who wish to separate MS4 Permit and UIC Rule areas. Remaining work on this element to meet the City Minimum Required LOS goals are further described below. Additional recommendations for improvements to the draft UIC SWMP are included in **Section 4.2.3**.
    - Evaluate if there are any changes to the MS4 Permit or UIC Rule areas that will impact either the MS4 or UIC SWMPs.
    - Modify programs to support the regulatory determination including service contracts, maintenance coordination, and inspection plans.
    - Complete and report on Citywide hydraulic analysis.
  - **UIC Retrofit Implementation Timeline** – The UIC Rule requires that UICs identified as high-threat to groundwater through City-assessment must be retrofit over an established timeline. Prior to the development of the Master Plan, no timeline associated with completing this work was defined. An implementation plan and timeline for completing this work was developed and is defined in the UIC Retrofit Program discussed in **Chapter 5.3**.
- **GIS/Asset Management/Webpage/Mapping Management** – During the consultant team's review of the City's GIS mapping, the following recommendations were noted for improvement:

GIS Data Mapping Needs – General Updates and Improvements

- Geolocate, track, and map all structures and facilities in areas within the City limits that are not currently mapped
- Track and map stormwater infrastructure from private development
- Improve accuracy/digitizing of ditches, waterbodies, pipes, and manholes
  - Perform quality assurance/quality control on the GIS data before publishing
- Label all streams and waterbodies (including unnamed tributaries)
- Refine or field verify wetlands for accuracy (the City noted these are currently inaccurate)
- Re-publish an improved field map application for data collection
- Develop a new GIS database to calculate stormwater fees

GIS Data Mapping needs – Attribute Updates

- Drywells – Determine and update "Installation date" attribute
- Catch Basins – Determine and update "Installation date" attribute; add attribute for catch basin type (e.g., Type I or Type II)
- Pipes – Determine and update "Installation date" attribute; further field inventory of pipes is needed (about 30 percent of pipes have unknown diameters)
- Ditches – Indicate flow direction via attribute table
- Streams and waterbodies – Indicate flow direction via attribute table

GIS Data Mapping Needs – New Layers

- Culverts – Develop a separate layer (other than pipes) to track this – may need an inventory program associated with this to capture unmapped culverts
- Future UIC projects – Develop a point/polygon layer for Future UIC Projects

4.2 Gap Analysis

4.2.1. Overview and Methods

The gap analysis compared the City's Stormwater Management Program to regulatory requirements, including the MS4 Permit and UIC Rule, to assess areas where the City could incorporate improvements to their Stormwater Management Program. This process also resulted in an estimate of resources needed to meet these requirements (**Section 4.3**). The steps involved in the assessment included the following:

- Summarize the MS4 Permit and UIC Rule requirements into a compliance checklist.
- Review relevant City documents to understand the City's existing activities to meet these requirements.
- Conduct interviews with City staff to clarify the information collected from the document review and/or gain additional insights into the City's stormwater program.
- Compile the information gathered to complete the customized compliance checklist and to identify gaps, recommend improvements, and generate a summary of resources needed to meet requirements. The completed compliance checklist resulted in the development of the prioritized schedule found in **Chapter 7**.

4.2.2. MS4 Permit Review

The first step of the MS4 Permit gap analysis involved using a compliance questionnaire and checklist. The compliance checklist identifies each MS4 Permit section associated with implementing a SWMP and summarizes the applicable 2019 to 2024 MS4 Permit requirements. The checklist indicates changes since the last permit by redlining language deleted from the 2014 through 2019 MS4 Permit and underlining language that is new. The checklist then sorts the requirements into eight categories to assist with filtering data and summarizing improvements. The eight categories include data management, documentation, O&M, policy development and implementation, recordkeeping, training, guidance, and a category for not applicable (N/A). The MS4 Permit language was then translated into questions which facilitated inquiries during a series of interviews led by the Stormwater Utility program. Fields were also added to the checklist to document City files, records, or reports that supported permit compliance; identify areas of improvement; make recommendations to form an action plan; and to assign a level of prioritization for each area of improvement. **Appendix E** includes a copy of the completed compliance checklist. **Table 3**, **Table 4**, and **Table 5**, respectively, summarize the Permit sections reviewed, review categories included in the compliance checklist, and define the level of prioritization.

Table 3. MS4 Permit Sections and Program Components Analyzed in Gap Analysis

Permit Section	Program Component
S4.F.3.d	Compliance with Standards
S5.A	Stormwater Management Program for Cities, Towns, and Counties
S5.B.1	Public Education and Outreach
S5.B.2	Public Involvement and Participation
S5.B.3	Illicit Discharge Detection and Elimination
S5.B.4	Construction Site Stormwater Runoff Control
S5.B.5	Post-Construction Stormwater Management for New Development and Re-Development
S5.B.6	Municipal Operations and Maintenance
S8	Monitoring and Assessment
S9	Reporting Requirements
G3, G19, G20	General Conditions

Table 4. MS4 Permit Review Categories and Definitions

Category	Definition
Data Management	Requirements regarding collection of data/information (i.e., monitoring, mapping, water quality, etc.).
Documentation	Requirements regarding the submittal of documents/reports to Ecology and/or the creation of documents/reports for internal or public use.
Operation & Maintenance	Requirements regarding stormwater-management-related O&M (i.e., O&M of structural BMPs, pollution prevention practices, etc.).
Policy Development & Implementation	Requirements regarding stormwater-program-related utility and/or City policies, procedures, guidelines, ordinances, municipal codes, etc.
Recordkeeping	Requirements regarding retaining information, records, and forms.
Training	Requirements regarding education of staff, developers, and other internal and external target audiences.
Guidance	The Permit condition offers guidance for different approaches a Permittee may use to meet permit requirements.
N/A	The Permit condition is either a definition, an introduction to a list of minimum requirements, or is not applicable to the City.

Table 5. Definition of Levels of Prioritization

Level of Prioritization	Definition
High	Action items related to past permit deadlines that require completion immediately or deadlines approaching in the near future (i.e., last quarter of 2022 and first quarter of 2023).
Medium	Action items to complete before an upcoming deadline during the permit cycle, or before the end of the permit cycle (i.e., July 31, 2024).
Low	Items not required by the permit but identified as additional opportunities for improvement.

4.2.2.1. Request and Review Documentation

Completion of the checklist involved identifying and requesting a list of documents, such as past SWMPs, maintenance records, manuals and standards, and GIS data from the City. The compliance checklist in **Appendix E** includes the names of the documents reviewed. The document review assessed compliance with the relevant MS4 Permit requirements. The compliance checklist summarized the findings of the document review by noting the specific document and content applicable to the MS4 Permit requirement. Any missing documents or information within documents were noted as areas to explore further during the interviews as their absence may suggest a deficiency. Finalizing the compliance checklist involved incorporating document review findings with notes from interviews into the compliance checklist.

4.2.2.2. Staff Interviews

The gap assessment involved conducting interviews with City staff involved in implementing the sections of the City's MS4 Permit that are outlined in **Table 3**. The interviews aided in corroborating information gathered during the document review to better understand different aspects of the City's SWMP. Discussion with City staff also provided insight regarding documentation processes, resources, and the City's overall compliance strategy. During the interviews, City staff provided details regarding who was responsible for each MS4 Permit-related task and an estimate of time to complete the task. The estimated time was separated into two categories, tasks funded by the existing Stormwater Utility and tasks funded by other departments (referred to in **Section 3.4** as programmed and non-programmed, respectively) which were then summed by MS4 Permit section. The total time for each category and MS4 Permit section was converted to an annual FTE count to determine how many full-time employees were dedicated to each area of the MS4 Permit. For areas where gaps were identified between what the City is doing and what the MS4 Permit requires, the additional time to complete required tasks were estimated to determine additional resources needed for the City to be fully compliant with the MS4 Permit (Minimum Required LOS goal). No Proactive LOS goals were identified for the MS4 Permit. **Section 4.3** includes a summary of the FTE estimates which are broken down by the LOS goals. The interviews covered all MS4 Permit requirements which fell under the staff's authority as listed in **Table 3**. The compliance checklist summarized the notes from each interview. The personnel interviewed included:

- Stormwater Engineer
- Street Superintendent
- Stormwater Engineering Technician
- Senior Engineer/Development
- Development Inspector

4.2.2.3. Finalize Permit Compliance Checklist

The compliance checklist recorded the results of the document review and staff interviews for each MS4 Permit requirement. Identifying areas of improvement involved comparing the documented results to the language of each MS4 Permit requirement. Recommended actions were then developed for the sections needing improvement, as well as aspects of SWMP implementation considered satisfactory but which

could benefit from enhancements. **Section 4.2.2.4** summarizes the areas identified for improvement and the respective recommendations.

4.2.2.4. Areas of Improvement and Recommendations for Improvement Plan

As a result of the MS4 Permit review, a total of 56 areas of improvement were identified. Of these, 49 were assigned a high-priority rating and require immediate action. The section in need of the most improvement was S5.B.3 Illicit Discharge Detection and Elimination with 17 high-priority areas of improvement. Section S5.B.6 Municipal Operations and Maintenance was second most in need of improvements with 12 high-priority areas. The gap analysis took place in July 2022 and involved review of the City's existing documents and stormwater program at that time. The City is continually developing and updating their stormwater program; therefore, several of the recommendations noted in this section may have been addressed during finalization of the Master Plan. Specifically, this may include updates to the City's ordinances and municipal O&M Plan, and submissions to Ecology of updates to the 2008 Spokane Regional Stormwater Manual to obtain current equivalency status. These ongoing updates were not taken into consideration during the gap analysis assessment.

The areas of improvement are summarized in the following tables. **Table 6** shows the total requirements compared to the high-priority areas of improvement and is organized by permit section. **Table 7** organizes the high-priority areas of improvement by category type. **Table 8** contains areas of improvement for MS4 Permit requirements due by a future date in the current permit cycle and the corresponding dates by which the actions are due.

Table 6. Total Requirements versus High-Priority Areas of Improvement by MS4 Permit Section

Permit Section	Total Requirements in Section	High-Priority Areas to Improve
S4. Compliance With Standards	1	0
S5.A Stormwater Management Program For Cities, Towns, and Counties	13	3
S5.B.1 Public Education and Outreach (E&O)	7	2
S5.B.2 Public Involvement and Participation	3	1
S5.B.3 Illicit Discharge Detection and Elimination	40	16
S5.B.4 Construction Site Stormwater Runoff Control	25	7
S5.B.5 Post Construction Stormwater Management	31	7
S5.B.6 Municipal Operations and Maintenance	27	11
S8. Monitoring and Assessment	11	1
S9. Reporting Requirements	9	0
General Conditions	7	1
Sum of All MS4 Permit Sections	**174**	**49**

Table 7. High-Priority Areas of Improvement by Category Type

Permit Category Type	Total Requirements in Category	High-Priority Areas to Improve
Data Management	6	1
Documentation	28	2
Operations and Maintenance	17	12
Policy Development and Implementation	72	19
Recordkeeping	30	8
Training	9	7
Guidance	5	
N/A	7	0
Total	**174**	**49**

Table 8. Future Areas of Improvement and Corresponding Due Dates

Area for Future Improvement Identified	Date Action is Needed
S4. Compliance With Standards	
None	
S5.A Stormwater Management Program For Cities, Towns, and Counties	
None	
S5.B.1 Public Education and Outreach (E&O)	
None	
S5.B.2 Public Involvement and Participation	
None	
S5.B.3 Illicit Discharge Detection and Elimination	
S5.B.3.a.i	August 1, 2023
S5.B.3.a.iii	
S5.B.3.a.iv	
S5.B.3.a.vi	
S5.B.3.a.vii	
S5.B.3.b.i	February 2, 2023
S5.B.3.b.iv	
S5.B.3.b.vi	
S5.B.3.b.vii	
S5.B.3.c.iv	March 31, 2024
S5.B.3.d	February 2, 2023
S5.B.4 Construction Site Stormwater Runoff Control	
S5.B.4.a	December 31, 2022
S5.B.4.a.ii	
S5.B.5 Post Construction Stormwater Management	
S5.B.5.b.ii.(a)	December 31, 2022
S5.B.6 Municipal Operations and Maintenance	
S5.B.6.a.i.(a)	December 31, 2022

Area for Future Improvement Identified	Date Action is Needed
S5.B.6.a.i.(b)	
S5.B.6.a.i.(e)	
S8. Monitoring and Assessment	
S8.A.2.c	September 30, 2022
S8.A.2.d	July 31, 2023
S8.A.2.e	December 1, 2023
S8.B	With annual report; 60 days (after final report is published); 90 days (after project complete)
S9. Reporting Requirements	
None	
General Conditions	
None	

The areas of improvement and corresponding recommendations are summarized in the following subsections according to MS4 Permit section. Each subsection details the MS4 Permit section, category type, priority, area of improvement, and resulting recommendation. Additional opportunities for enhancement, which are not associated with an area of improvement, are summarized in separate tables. These opportunities are rated low priority. The recommendations for improvement in this section also correspond with a schedule provided in **Chapter 7**.

S4. COMPLIANCE WITH STANDARDS

At the time of the assessment, no areas for improvement were identified under the S4. section of the MS4 Permit.

S5.A STORMWATER MANAGEMENT PROGRAM FOR CITIES, TOWNS, AND COUNTIES

Areas identified for improvement under Section S5.A were related to the documentation, policy development and implementation, and recordkeeping categories. The areas of improvement and recommendations are summarized in **Table 9**. Additional, low-priority recommendations for this section, which are not associated with a specific area of improvement, rated low priority, are provide in **Table 10**.

Table 9. Areas of Improvement for Section S5.A

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.A.6.a.i	Policy Development and Implementation	High	Missing a coordination mechanism to clarify roles and responsibilities with other entities for the control of pollutants between connected MS4s.	Confirm where interconnected MS4 areas exist covered by a MS4 Permit. Once this area is identified, coordinate with City of Spokane (and other entities, if necessary) to establish and document roles and responsibilities for the control of pollutants.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.A.6.a.ii	Policy Development and Implementation	High	Missing a coordination of stormwater management activities for shared water bodies or watersheds among Permittees to avoid conflicting plans, policies, and regulations.	Coordinate and document stormwater management activities for shared water bodies or watersheds with other Permittees to avoid conflicting plans, policies and regulations. This effort can be combined with S5.A.6.a.i.
S5.A.5.a	Recordkeeping	High	Missing an ongoing/established program for tracking, maintaining, and using information to evaluate SWMP development, implementation, and MS4 Permit compliance.	Develop an ongoing/established program for tracking SWMP development and implementation. Recommend roughly tracking separate line items for each SWMP component. This checklist can be adopted as a tracking tool. The FTE estimate hours from this checklist can be used as a starting point.

Table 10. Additional Recommendations for Improvement for Section S5.A

Permit Section	Category Type	Priority	Additional Area of Improvement	Recommendation for Improvement
S5.A.6.b	Documentation	Low	The City developed a written description by the March 31, 2021, permit deadline of internal coordination mechanisms among departments with regard to MS4 Permit-related responsibilities. To strengthen compliance, the document should be evaluated for the effectiveness of these mechanisms, identifying process improvements if and where needed.	To strengthen compliance, the internal coordination mechanisms should be evaluated for effectiveness, identifying process improvements if/where needed.

S5.B.1 PUBLIC EDUCATION AND OUTREACH

Areas identified for improvement under Section S5.B.1 were related to the policy development and implementation category. The areas of improvement and recommendations are summarized in **Table 11**.

Table 11. Areas of Improvement and Recommendations for Section S5.B.1

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.1.a	Policy Development & Implementation	High	Missing an ongoing or strategic schedule for providing E&O-specific subject area information to different target audiences.	Develop and document a strategic or ongoing schedule for providing specific subject area information to different target audiences. Start by documenting the schedule of existing practices and fill in gaps for all target audiences to formalize schedule.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.1.a.iii	Policy Development & Implementation	High	A specific E&O program does not exist for engineers, construction contractors, developers, development review staff, and land use planners.	Develop a specific E&O program for engineers, construction contractors, developers, development review staff, and land use planners by formalizing and documenting existing E&O efforts already occurring at the City for these audiences. The E&O program should include an improved bridge to the SWMMEW for the new UIC and low-impact development criteria through revision of SVMC 22.150.040 language, amendment of the SRSM, or adoption of the SWMMEW. The E&O program could also be used as a step in the City's escalating enforcement approach. Update the SWMP to describe this new E&O program.

S5.B.2 PUBLIC INVOLVEMENT AND PARTICIPATION

The area identified for improvement under Section S5.B.2 was related to the policy development and implementation category. The area of improvement and recommendation are summarized in **Table 12**.

Table 12. Areas of Improvement and Recommendations for Section S5.B.2

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.2.a	Policy Development & Implementation	High	A program or policy does not exist for ongoing opportunities for the public to participate in the development, implementation, and updates of the SWMP.	Develop and document a program or policy for ongoing opportunities for the public to participate in the development and updates of the SWMP. Consider using Spokane Valley Hot Topic mailing to inform public of draft SWMP and provide mechanism for receiving input. Consider methods to identify and reach underserved communities.

S5.B.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Areas identified for improvement under Section S5.B.3 were related to the documentation, O&M, policy development and implementation, recordkeeping, training, and guidance categories. This permit section had the greatest number of areas of improvement compared to other permit sections.

However, it should be noted that in several cases the City is already conducting the work required by the permit, but formal documentation of the procedures and/or a method to track the work is missing. Areas of improvement in this section regarding ordinances are anticipated to be addressed by the end of 2022 as part of the City's Spokane Valley Municipal Code update regarding IDDE requirements. The areas of improvement and recommendations are summarized in **Table 13**. Additional recommendations for this permit section not associated with a specific area of improvement, rated low priority, are provided in **Table 14**.

Table 13. Areas of Improvement for Section S5.B.3

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.3.c.i	Operations & Maintenance	High	Proper documentation for existing procedures for illicit discharge investigations during routine inspections is missing.	Document existing procedures for illicit discharge investigations during routine inspections. Add an illicit discharge component to the inspection field report.
S5.B.3.c.ii		High	Existing procedures for screening "high risk" locations and activities may not be specific and detailed enough to be sufficient for compliance.	Review approach to screen "high risk" locations and activities to identify ways to improve the process. Update the document, as needed. If a source control program gets introduced in the next permit cycle, this screen can be used to identify priority areas for the program.
S5.B.3.c.iii		High	Formal documentation of procedures for field assessment activities, including outfalls, discharge points, or facilities serving priority areas is missing.	Develop and document formal procedures for field assessment activities, including outfalls, discharge points, or facilities serving priority areas identified in S5.B.3.c.ii. Field activities, including inspections, should occur during dry weather to help identify illicit discharges/connections.
S5.B.3.c.iv		High	Formal inspection and tracking program for illicit discharges does not exist.	Verify MS4 area upon separation of MS4 area and UIC area via City modeling. For the MS4 area develop and document formal IDDE inspection procedures. This may include developing a checklist and adding it to the maintenance procedures. Develop a process to track inspections and maintain records, such as in GIS or the City's future asset management program.
S5.B.3.d.iii		High	Procedures for eliminating discharges, including technical assistance, follow-up inspections, and use of a compliance strategy including escalating enforcement has not been formally documented.	Develop and document formal procedures for eliminating discharges, including technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.B.3.b.vi including escalating enforcement and legal actions if the discharge is not eliminated.
S5.B.3.d.iv.a		High	The IDDE Flowcharts instruct to call 911 for spills to the ground that pose an immediate threat to health or the environment, but a formal procedure is missing.	Update the Spill Response Plan or Illicit Discharge Response Plan to require 911 to be called for spills to the ground that pose an immediate threat to health or the environment.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.3.d.iv.c	Operations and Maintenance	High	A specific 21-day requirement to initiate an investigation of any report or discovery of a suspected illicit connection is missing.	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.
S5.B.3.b.i	Policy Development and Implementation	High	The existing ordinance prohibits unauthorized waters or other liquids onto City property, rights-of-ways, or boarder easements, but does not include language regarding stormwater facilities on private properties or preventing illicit discharges from pollutant-generating sources associated with existing land uses and activities.	The ordinances should be updated to allow inspection and enforcement on private property for violations of illicit discharge to public facilities. Language providing for inspections and enforcement should be included in the ordinance update. The next permit cycle is expected to include a Source Control Program requirement, involving developing appropriate ordinances. The City could choose to include source control ordinances, using similar jurisdictions or the WWA manual as a guide, in the ordinance update for IDDE, resulting in less effort for the next permit cycle.
S5.B.3.b.vi		High	Ordinances do not include the application of operational or structural source control BMPs (from the SWMMEW), or both, for pollutant-generating sources associated with existing land uses and activities where necessary to prevent illicit discharges.	Update the IDDE ordinances to include the application of operational or structural source control BMPs (from the SWMMEW), or both, for pollutant-generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. A compliance strategy that includes informal compliance actions such as public education and technical assistance should also be developed and implemented.
S5.B.3.b.vii		High	Ordinances have not been updated to address all requirements in S5.B.3.	Update ordinances addressing requirements in S5.B.3, as necessary, by the permit deadline of February 2, 2023.
S5.B.3.d.i		High	Established procedure for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges	Develop an established procedure for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported. Include procedures to

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
			found or reported is missing.	address the evaluation of whether the discharge shall be immediately contained and steps to be taken for containment of the discharge.
S5.B.3.d.iv.d	Policy Development and Implementation	High	A requirement to use a compliance strategy in a documented effort to eliminate the illicit connection within 6 months upon confirmation of an illicit connection is missing.	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to document the efforts to eliminate the illicit connection within 6 months.
S5.B.3.a.i	Recordkeeping	Medium	Size and material are missing in GIS for approximately 25 percent of known outfalls and discharge points. Reference Section 4.1 for additional discussion regarding gaps in GIS data.	Close information gaps by updating GIS mapping to include missing size and material for all known outfalls and discharge points.
S5.B.3.a.iii		Medium	Approximately 50 percent of swales are not mapped within GIS.	Close information gaps to complete GIS mapping of areas served by the MS4 discharging to the ground, including missing swales.
S5.B.3.a.iv		Medium	Approximately 20 percent of permanent stormwater facilities owned or operated by the City are not mapped within GIS.	Close information gaps by completing GIS mapping of permanent stormwater facilities owned or operated by the City.
S5.B.3.a.vi		Medium	Modeling of the MS4 area is not complete; therefore, confirmation of no connections from the MS4 to privately owned facilities cannot yet be complete.	Once modeling is complete and MS4 area is confirmed, verify there are no connections from the MS4 to privately owned facilities.
S5.B.3.a.vii		Medium	Modeling of the MS4 area is not complete; therefore, confirmation of no connections between the MS4 and other municipalities or public entities cannot yet be complete.	Once modeling is complete and MS4 area is confirmed, verify there are no connections between the MS4 owned and operated by the Permittee and other municipalities or public entities
S5.B.3.e		High	A method to document and maintain records for IDDE training does not exist.	Develop method to document and maintain training records for IDDE training. See S5.B.3.c.vi.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.3.c.vi	Training	High	Formal training specifically for all municipal field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system does not exist.	Develop training specifically for all municipal field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, on the identification of an illicit discharge/connection, and the proper procedures for reporting and responding to an illicit connection. Include follow-up training for staff that addresses changes in procedures, techniques, requirements, or staffing. The program should also include documentation and maintenance of training records. The training materials on the Washington Stormwater Center's website may be a good resource.
S5.B.3.e		High	A formal training program for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges is missing.	Develop a training program for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections. The City can consider combining this with S5B3c.vi.
S5.B.3.e		High	Follow-up training to address changes in procedures, techniques, requirements, or staffing does not exist.	Develop follow-up training to be provided as needed to address changes in procedures, techniques, requirements, or staffing.

Table 14. Additional Recommendations for Improvement for Section S5.B.3

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.3.b.iii	Guidance	Low	–	Not a requirement, but the City can consider adding allowable discharges to language in existing code or defining allowable discharges in a frequently asked question format.
S5.B.3.b.iii		Low	–	Not a requirement, but the City can consider adding conditionally allowable discharges to language in existing code.
S5.B.3.b.iv	Policy Development and Implementation	Low	–	If the City decides to incorporate allowable or conditionally allowable discharges in updated code, the code should address any category of allowable or conditionally allowable discharge that is identified as a significant source of pollutants.

S5.B.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Areas identified for improvement under Section S5.B.4 were related to the policy development and implementation, recordkeeping, and training categories. The areas of improvement and recommendations are summarized in **Table 15**.

Table 15. Areas of Improvement and Recommendations for Section S5.B.4

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.4.a	Policy Development & Implementation	High	Sites are not currently inspected prior to clearing and grading.	Develop an ordinance or other regulatory mechanism that requires site plans to be reviewed and sites to be inspected prior to clearing and grading for sites with high potential for sediment transport. The City may choose to develop a system to identify sites with high potential for sediment transport and only inspect those sites or inspect all sites before clearing and grading. Develop and implement ordinance no later than December 31, 2022.
S5.B.4.a.ii		High	The City's Erosion Control Plans do not require all 13 elements described in S9.D of the Construction Stormwater Permit.	For the City's Erosion Control Plans (ECP) to be equivalent to Stormwater Pollution Prevention Plans to meet permit requirements, the 13 elements described in S9.D of the Construction Stormwater Permit must be addressed. ECP requirements listed in the SRSM are out of date and do not include Element 12 - Manage the Project and Element 13 - Protect Low Impact Development BMPs. Review and update ECP requirements to include all requirements described in S9.D.
S5.B.4.b.i.(a)		High	A plan and communication channel for Ecology to notify the City when an Erosivity waiver has been granted within the City is missing.	Develop a process that establishes a communication channel with Ecology to be notified when Ecology has granted an erosivity waiver within the City. The City should receive a copy of the applicable documentation and have a process to track and record the waivers.
S5.B.4.c.i.(a)		High	A process to determine and inspect sites with high potential for sediment transport is missing.	Develop a process to determine sites with high potential for sediment transport. Create policy to inspect sites with high potential for sediment transport prior to clearing and grading for construction. See S5.B.4.a.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.4.f.ii	Recordkeeping	High	Records of all training – even site-specific mentorship – including dates, activities or course descriptions, and names and positions of staff in attendance, are not documented and kept.	Document and keep records for all training – even site-specific mentorship. Include dates, activities or course descriptions, and names and positions of staff in attendance.
S5.B.4.f.iv		High	A process to keep a record of all construction sites that provide notice to Ecology of their intention to apply for the waiver is missing.	Develop a process to keep a record of all construction sites that provide notice to Ecology of their intention to apply for the erosivity waiver. This will require developing a communication channel with Ecology to be notified when Ecology has granted a waiver within the City.
S5.B.4.d	Training	High	Formal documentation of other forms of training, such as site-specific training is missing.	Document site-specific training, including who attended, role, and topics covered.

S5.B.5 POST CONSTRUCTION STORMWATER MANAGEMENT

Areas identified for improvement under Section S5.B.5 were related to the policy development and implementation, recordkeeping, and training categories. The areas of improvement and recommendations are summarized in **Table 16**.

Table 16. Areas of Improvement and Recommendations for S5.B.5

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.5.b.ii.(a)	Policy Development and Implementation	High	A policy encouraging project proponents to minimize the disturbance of native soils and vegetation and reduce the total amount of impervious surface does not exist.	Along with allowing non-structural preventative actions and source reduction approaches such as LID, the City should develop and adopt a policy as part of the City's post-construction stormwater management ordinances to encourage minimizing disturbance of native soils and vegetation and reducing the total amount of impervious surface on projects.
S5.B.5.d.ii		High	An ordinance, program, and schedule to require structural BMPs to be inspected at least once every 5 years after final installation is missing.	Develop a program and schedule requiring structural BMPs to be inspected at least once every 5 years after final installation, or more frequently if needed.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.5.d.iii	Policy Development and Implementation	High	O&M standards for structural BMPs appear outdated.	Include updated O&M standards that meet those recommended in the SWMMEW in the City's updated O&M Plan.
S5.B.5.d.iv		High	Formal, documented procedures for documenting, reporting, and repairing structural BMPs for situations where a site is inspected and a problem is identified are missing.	Include methods for documentation, reporting, and repair procedures in updated O&M manual for situations where a site is inspected and problems are identified during structural BMP inspections.
S5.B.5.g.ii	Recordkeeping	High	The City does not have a formal training program; therefore, training records do not exist.	Include a process in the training development to document and keep training records that include dates, activities or course descriptions, and names and positions of staff in attendance. See S5.B.5.e.
S5.B.5.e	Training	High	Documented procedures for formal training for all staff involved in permitting, planning, review, inspection, and enforcement is missing. The City already conducts informal training but needs to document the process.	Develop formal training for all staff involved in permitting, planning, review, inspection, and enforcement. The City already conducts informal training but needs to document the process.
S5.B.5.f		High	A method to provide information to design professionals about training available on how to comply with the requirements of Appendix 1 and apply the BMPs described in the SWMMEW does not exist. While a lot of information about training is provided to design professionals, none are about training.	Develop method to provide information to design professionals about training available on how to comply with the requirements of Appendix 1 and apply the BMPs described in the SWMMEW. This may be an opportunity to combine this requirement with E&O requirements by creating a targeted E&O campaign for design professionals. See S5.B.1.a.iii.

S5.B.6 MUNICIPAL OPERATIONS AND MAINTENANCE

Areas identified for improvement under Section S5.B.6 were related to the data management, operations and maintenance, recordkeeping, training, and guidance categories. The areas of improvement and recommendations are listed in **Table 17**. Additional recommendations for this permit section not associated with a specific area of improvement, rated low priority, are provided in **Table 18**. The City is in the process of developing an updated O&M Plan for the MS4 area. This updated plan is anticipated to address applicable recommendations listed for this permit section.

Table 17. Areas of Improvement and Recommendations for Section S5.B.6

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.6.a.i.(j)	Data Management	High	Information regarding implementing BMPs to protect water quality from discharges from other facilities is missing from the O&M Plan for the MS4 area.	Update MS4 O&M Plan to include BMPs implemented to protect water quality from discharges from other facilities that would reasonably be expected to discharge contaminated runoff.
S5.B.6.a.iii		High	Details on which department (and where appropriate, the specific staff) is responsible for performing each activity in the MS4 O&M Plan is missing.	Include department (and where appropriate, the specific staff) responsible for performing each activity in the updated MS4 O&M Plan.
S5.B.6.a.i.(a)	Operations & Maintenance	High	Detailed O&M practices and procedures to address collection and conveyance systems, including pipes and culverts is missing for the MS4 area.	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address collection and conveyance systems, including pipes and culverts.
S5.B.6.a.i.(b)		High	O&M Plan for the MS4 area does not include detailed O&M practices and procedures to address parking lots (greater than 5,000 square feet of pollutant-generating impervious surface) that are owned, operated, or maintained by the City.	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address parking lots (greater than 5,000 square feet of pollutant-generating impervious surface) that are owned, operated, or maintained by the City.
S5.B.6.a.i.(e)		High	Detailed information regarding O&M for parks and open spaces is missing in the O&M plan for the MS4 area.	Update O&M Plan for MS4 area to address O&M for parks and open spaces after modeling of MS4 area has been completed and parks/open space within the MS4 area determined.

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S5.B.6.a.ii(b)	Operations & Maintenance	High	A formal plan and schedule to inspect catch basins within the MS4 once every 2 years, or other options available in Section S5.B.6.a.iib.1-3 of the Permit does not exist.	Develop plan, including schedule and documentation process to inspect catch basins within the MS4 once every 2 years, or other options available in Section S5.B.6.a.iib.1-3 of the Permit (see additional recommendations).
S5.B.6.a.ii(c)		High	A formal plan for spot checking stormwater control facilities after a major storm event is missing.	Develop a formal plan with procedures and documentation process for inspecting stormwater control facilities after a major storm event. Plan should include what triggers an inspection.
S5.B.6.a	Record Keeping	High	The City is separating the MS4 activities from the UIC activities. O&M Plan implemented for the MS4 area is out of date.	Update O&M Plan for MS4 area and UIC area by December 31, 2022.
S5.B.6.a.ii		High	The schedule of inspections and requirements for record keeping may be out of date per S9 Reporting in the O&M Plan for the MS4 area.	Update MS4 O&M Plan to include a schedule of inspections and requirements for record keeping pursuant to S9 Reporting.
S5.B.6.a.ii.(a)		High	A formal plan and schedule to inspect water quality and flow control facilities (swales & UICs) within the MS4 area once every two years is missing.	Develop plan, including schedule and documentation process, to inspect water quality and flow control facilities (swales and UICs) within the MS4 area once every 2 years.
S5.B.6.b	Training	High	Formal training specific to O&M that includes the inspection/maintenance of each type of facility within the city does not exist.	Develop formal training with documentation process specific to O&M that includes the inspection/maintenance of each type of facility within the city.

Table 18. Additional Recommendations for Improvement for Section S5.B.3

Permit Section	Category Type	Priority	Additional Area of Improvement	Recommendation for Improvement
S5.B.6.a.ii(b)(1)	Guidance	Low	The City does not have adequate data to propose an alternative catch basin inspection frequency.	The City may choose to collect inspection data and evaluate alternative frequency when enough catch basin data has been collected.
S5.B.6.a.ii(b)(2)		Low	Inspecting catch basins on a "circuit basis" can be evaluated when developing inspection plan for catch basins within the MS4.	The City may choose to evaluate inspecting catch basins on a "circuit basis" when developing inspection plan for catch basins within the MS4.

S8. MONITORING AND ASSESSMENT

Within Section S8, the areas identified for improvement were all items to be completed before a future deadline in the current permit cycle. The items are related to the City's involvement in the Non-Vegetated Bioretention Soil Mix Study, which has not begun. The items that will need to be completed as part of the study are provided in **Table 19**.

Table 19. Areas of Improvement and Recommendations for S8

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
S8.A.2.c	Documentation	High	Detailed Study Design Proposal for the Non-Vegetated Bioretention Soil Mix study has not yet been submitted to Ecology.	Submit a Detailed Study Design Proposal for the Non-Vegetated Bioretention Soil Mix Study to Ecology by September 30, 2022.
S8.A.2.d		Medium	A completed Quality Assurance Project Plan (QAPP) has not yet been submitted to Ecology.	Submit a completed QAPP to Ecology by July 31, 2023.
S8.A.2.e	Policy Development & Implementation	Medium	The study outlined in the QAPP has yet to start.	Begin to conduct the study outlined in the QAPP on or before December 1, 2023.

S9. REPORTING REQUIREMENTS

At the time of the assessment, no areas for improvement were noted under the S9. Reporting Requirements section of the permit.

GENERAL CONDITIONS

Within the General Conditions section, the area identified for improvement was related to the policy development and implementation section. The area of improvement and recommendation is listed in **Table 20**.

Table 20. Areas of Improvement for the General Conditions Section

Permit Section	Category Type	Priority	Area of Improvement	Recommendation for Improvement
G20	Policy Development & Implementation	High	Ecology is not necessarily notified when the City is unable to comply with any of the terms and conditions of the permit.	Develop a process to notify Ecology when the City is unable to comply with any of the terms and conditions of the permit. Notification should be in writing and submitted within 30 days of becoming aware that the non-compliance has occurred. Submittal of a G20 offers Permittees a degree of protection, particularly from the risk of third-party lawsuits. G20s also provide Ecology feedback, especially in instances where they are receiving multiple notifications regarding the same issue from Permittees. This may help indicate the permit language is unclear or the expectation is unrealistic.

4.2.2.5. Anticipated 2024 to 2029 Permit Requirements

The next MS4 Permit will be issued on July 1, 2024, for the 2024 to 2029 cycle. Ecology has not yet released the draft MS4 Permit; however, they have identified items that may be added or modified in the next permit. These items are summarized in **Table 21** along with discussion regarding how the requirement could impact the City. This information was used to estimate resource needs in **Section 4.3**.

Table 21. Anticipated 2024 to 2029 MS4 Permit Requirements

Anticipated Permit Requirement	How this may impact the City
Control of Runoff (from 1 acre to 5,000 square feet of pollution generation impervious surface and 10,000 square feet new impervious surface as a trigger for when stormwater management is required)	No change for the City.
Education & Outreach – Social Marketing or Community-Based Social Marketing	The City may be required to develop a behavior change campaign following social marketing or community-based social marketing practices and evaluate the effectiveness of this new program. This evaluation would be in addition to evaluation requirement in the 2019-2024 MS4 Permit Section S5.B.1.
Effectiveness Studies	Currently Permittees meet the S8. Monitoring and Assessment requirements by being a lead or participating entity on a BMP effectiveness study. Ecology is considering creating additional options for Permittees to meet this requirement including developing a program similar to Stormwater Action Monitoring where Permittees pay into a fund and Ecology organizes the implementation of multiple effectiveness studies. Alternatively, Permittees maybe allowed to conduct outfall monitoring at multiple locations. The financial resource needs for this work were doubled from the last permit cycle to estimate future rates.
Stormwater Retrofits (Stormwater Structural Controls [SSC] & Stormwater Management Action Plan [SMAP])	SSC and SMAP work is associated with developing stormwater retrofit plans for areas where there is insufficient or no stormwater management in place. The SSC requirement defines the specific types of stormwater BMPs that can be used to improve hydrology and water quality to receiving waters along with the amount of retrofitting needed each permit cycle. The SMAP work focuses on developing a plan to identify locations where stormwater retrofit work is most needed. The resource estimate for this work included increasing FTE needs along with funding to hire a consultant to assist with the SMAP work. In addition, on retrofit project per permit cycle was added to the Chapter 5 CIP budget.

Anticipated Permit Requirement	How this may impact the City
Enhanced Source Control – Program development	Permittees may be required to develop a Source Control Program like what WWA Phase II Permittees were required to develop in their 2019-2024 MS4 Permit. Resource estimates for this work were added and assume that a consultant would be hired to develop half of the program and 0.15 FTEs were added per year to assist with developing and implementing the program.
Emerging Pollutants	New pollutants maybe added to the required list of pollutant that need to be treated: 6PPD and 6PPD-q. If this change occurs, then the city would be required to evaluate areas to determine if additional treatment is required and if so provide BMPs approved to reduce these new contaminants. Based on preliminary results, it appears that the conditions that trigger metals treatment as well as the respective BMPs used to reduce metals will be similar for 6PPD and 6PPD-q. As such only a small level of effort was added to the Minimum Required LOS for this change.
Environmental Justice Incorporation	Environmental Justice focuses on providing equitable stormwater services to the Permittee's community. Ecology has not defined how this requirement will be added to the next MS4 Permit only that it will be added. Based on other MS4 Permits in the Nation, it is anticipated that this could include changes to numerous MS4 programs such as approaches for distributing E&O materials, including Environmental Justices in the CIP prioritization process, or having dedicated funding to provide services in low-income communities. Resources for 0.05 FTE per year were added to the Section 4.3 to incorporate Environmental Justice into the City's existing programs.

4.2.3. UIC Rule Review

A UIC Compliance checklist was developed that outlines the UIC Rule requirements from Section 5.6 (Subsurface Infiltration - UIC Wells) of the SWMMEW. Organization of the UIC SWMP checklist includes categories for mapping and asset management along with the 16 subsections from Section 5.6. **Table 31** lists the compliance checklist's program components. The process for comparing the checklist to what the City is actually doing to identify gaps and recommended improvements followed a similar process as described for completing the MS4 Permit checklist in **Sections 4.2.2.1** to **4.2.2.3**. A copy of the completed UIC Rule Compliance Checklist is located in **Appendix F**.

The only document reviewed to develop the UIC compliance checklist was the January 2021 Draft UIC SWMP. Because this document is a work in progress with a planned completion by the end of the year. many of the recommendations noted in this section may have already been addressed by the City or are currently under development. This report section is organized differently than the **Section 4.2.2** MS4 Permit Review because the UIC Rule provides Permittees with more flexibility and with fewer explicit deadlines in developing their UIC SWMP compared to the MS4 SWMP. In addition, recommended improvements were not prioritized because they all need to be developed as part of the UIC SWMP which the City is currently developing.

Table 22. SWMMEW UIC Rule Program Components Analyzed in Gap Analysis

Manual Section	Program Component
5.6.2	Rule-Authorization or Permit
5.6.3	Registration
Not Applicable	Mapping and Asset Management
5.6.4	Meeting the Non-Engagement Standard
5.6.5	Well Assessment
5.6.6	Preservation and Maintenance Projects
5.6.7	Emergency Situations
5.6.8	The Presumptive Approach
5.6.9	The Demonstrative Approach
5.6.10	Siting and Design of New UIC Wells
5.6.11	Operations and Maintenance of UIC Wells
5.6.12	Prohibitions
5.6.13	Source Control and Runoff Treatment Requirements
5.6.14	Spills and Illicit Discharges
5.6.15	Deep UIC Wells
5.6.16	Determining Treatment Requirements
5.6.17	Classification of Vadose Zone Treatment Capacity

4.2.3.1. Areas of Improvement and Recommendations

RULE AUTHORIZATION OR PERMIT (SWMMEW 5.6.2)

At the time of the assessment, no program gaps were identified or areas for improvement noted.

REGISTRATION (SWMMEW 5.6.3)

Currently the City does not have a means of confirming the filing of new UIC well registrations within 60 days prior to construction, particularly for forms completed by consultants on their behalf.

While the City has been meeting the new UIC well registration deadline, developing a process for confirming their consultants submit completed registration forms within 60 days prior to construction is recommended.

MAPPING AND ASSET MANAGEMENT

At the time of the assessment, no program gaps were identified. However, upon the City's completion of the UIC SWMP, there should be a continuous maintenance of GIS mapping of UIC assets and condition status for ongoing management of these facilities (e.g., operational and maintenance).

MEETING THE NON-ENDANGERMENT STANDARD (SWMMEW 5.6.4)

At the time of the assessment, no program gaps were identified or areas for improvement noted other than those included in related sections, which are described in this section.

WELL ASSESSMENT (SWMMEW 5.6.5)

At the time of the assessment, no program gaps were identified. However, the following recommendations for improvement include:

- For consistency with the well assessment, consider rephrasing the following passage in the UIC SWMP from "If the existing UIC conforms to current standards as outlined in the SRSM, the UIC

received no assessment" to "Existing UIC conforming to current SRSM standards (considered protective of groundwater) do not require further assessment to evaluate potential risks."

- Consider adding the following to the retrofit program as part of a proactive approach:
  - Correct areas with known system capacity deficiencies (i.e., flood-prone areas) or that pose operational challenges.
  - Identify opportunities to improve operational efficiency by transitioning small roadside decentralized UIC systems with small capture areas (i.e., individual catch basin to drywell) to larger regional facilities capable of capturing and treating large areas. Potential benefits realized may include: 1) economy of scale advantages from systems designed with centralized operations and maintenance in mind, 2) reduced traffic interruptions during maintenance (i.e., vactoring), and 3) additional safeguards to reduce vehicle spill risk and extend spill response times in high crash prone areas.
- Clearly state all assumptions for the City's streamlined well assessment process. Consider summarizing this information in a table format rather than narratively in paragraphs.
- In determining appropriate levels of treatment required, consider the role source control measures could play for low-pollutant-loading sites, an option in SWMMEW's Table 5.23 available in lieu of structural treatment BMPs. This could reduce the number existing UICs requiring structural treatment retrofits.
- Consider whether to include more siting requirements in the criteria. For example, minimum distances.
- Conduct a word search in the UIC SWMP and replace all instances of "*water quality standard*" with "*water quality treatment standard*". Water quality standards apply to conditions in receiving waters whereas water quality treatment standards apply to level of water quality treatment required for stormwater runoff.

PRESERVATION AND MAINTENANCE PROJECTS (SWMMEW 5.6.6)

The UIC SWMP does not mention preservation and maintenance projects. To rectify this, add language on how the City addresses preservation and maintenance projects to preserve/protect infrastructure by rehabilitation or replacing existing structures to maintain operational and structural integrity as well as for the safe and efficient operation of the UIC well.

EMERGENCY SITUATIONS (SWMMEW 5.6.7)

The UIC SWMP does not mention emergency situations. To rectify this, add language discussing if the City will allow use of substandard UICs in emergency situations (e.g., roadway flooding) per the conditions in SWMMEW's 5.6.7.

THE PRESUMPTIVE APPROACH (SWMMEW 5.6.8)

The UIC SWMP does not mention how meeting all the requirements detailed in SWMMEW 5.6.8 meet the *presumptive approach* to comply with the non-endangerment standard. To rectify this, add language regarding how implementation of these requirements can presumptively meet the non-endangerment standard.

THE DEMONSTRATIVE APPROACH (SWMMEW 5.6.9)

The UIC SWMP does not recommend achieving compliance via the *demonstrative approach*. Suggest clarifying in the UIC SWMP if the City would allow compliance via the *demonstrative approach* under certain conditions and, if so, state those conditions and indicate that pursuing this pathway requires complying with the conditions detailed in SWMMEW 5.6.9.

SITING AND DESIGN OF NEW UIC WELLS (SWMMEW 5.6.10)

The UIC SWMP does not include reference to restriction siting UIC wells; however it is implied in the siting requirements. To rectify this, add explicit language regarding restricting siting UIC wells in prohibited areas per SWMMEW 5.6.10 as well as areas with contaminated soils.

While the SRSM references the 72-hour drawdown time, it does not mention that the long-term infiltration rate must be sufficient to accommodate the water quality design storm. Consider adding this to the UIC SWMP to close this gap.

Consider clarifying references in the UIC SWMP Siting Requirement section. For example, the references to Appendix 3 in the UIC SWMP do not clarify why the City monitors contaminant levels or how the levels relate to protecting drinking water standards. Should this information reside in another section of the UIC SWMP, reference that section rather than the appendix. Further, the document contains references to the "Existing UIC Stormwater Pollution Plan," but the document contains no such section.

OPERATION AND MAINTENANCE OF UIC WELLS (SWMMEW 5.6.11)

Based on content in Section 5.4 of the SWMMEW and discussions with stormwater and maintenance staff, the City's current practices suggest the City meets compliance expectations. Suggestions to consider when developing the UIC O&M Plan include:

- Add content regarding treatment for solids removal or use of a downturn elbow upstream of discharges to UIC to reduce need for maintenance.
- Indicate the frequency and schedule for inspecting and cleaning UICs. Currently the UIC Rule references the maintenance criteria in the SWMMEW (Section 6.A.6) as recommendations, not requirements. Documenting inspection records, sediment accumulation, and observed flooding can form the basis to justify maintenance frequencies in the event Ecology decides to set UIC maintenance requirements in the future.
- Establish the frequency and schedule for maintenance of catch basins, BMPs, culverts, and storm drains for area served by UICs.
- Develop an inspections template to document problems encountered, including when they emerged. This template should include the items outlined in Section 6A of the SWMMEW for drywells.
- Consider how more frequent street sweeping might reduce the frequency of cleaning UICs.
- Add an integrated pest management program to reduce application risk of fertilizers, pesticides, and herbicides commingling with stormwater runoff conveyed to UIC facilities.
- Add culvert and ditch maintenance in the O&M plan.

PROHIBITIONS (SWMMEW 5.6.12)

The UIC SWMP does not mention prohibitions or how the City enforces them. To rectify this, include language on the City's approach to prohibiting and enforcing prohibitions. This may include references to ordinances addressing illicit discharges. Existing drywells receiving prohibited discharges require a separate groundwater discharge permit. Given the City is separating its management approach for its UICs and MS4s, consider adding more explicit language to the ordinances related to prohibited discharges to UICs.

SOURCE CONTROL AND RUNOFF TREATMENT REQUIREMENTS (SWMMEW 6.6.13)

The UIC SWMP does not address program components for good housekeeping, using SWMMEW's source control BMPs, and deploying targeted pollution prevention E&O campaigns targeted to UICs.

In developing a UIC-oriented source control program, the City should consider to what extent existing and future source control elements from the MS4 Permit and corresponding MS4 SWMP can play in meeting

both regulatory obligations. Consider developing a source control program for existing development (i.e., inspections of pollutant generating sources at publicly and privately owned institutional, commercial, and industrial sites) akin to the one that may get introduced into the 2024 to 2029 MS4 Permit. Such a program can incorporate proactive inspections, particularly for sites with the potential to discharge to the City's UIC system.

The UIC SWMP should:

- Outline a UIC-oriented E&O program focusing on relevant source control for pollutants associated with land uses with the potential to have runoff flowing to their UIC wells. This can include E&O programs that support and enhance effectiveness of the City's other source control/pollution prevention programs (e.g., public awareness of spill reporting hotlines). Similarly, campaigns for pet waste and, if applicable, septic system maintenance. Consider using E&O resources to assist in the development and deployment of a staff training plan. Such a plan should outline applicable training expectations by various City job types.
- Describe good housekeeping practices (i.e., storage of materials and chemicals, during field operations such as road repair, resurfacing, and striping, exterior building cleaning and vehicle washing).
- Explicitly state that the City uses source control BMPs contained in the SWMMEW's (or equivalent manual). This includes a description of programs addressing bacteria, including those from pet waste. Aspects to consider include whether the City is completely on sanitary sewer or has any septic systems. If septic systems exist, they should describe mechanisms to coordinate with the relevant entity (e.g., Health Department/Health District) for source tracing as well as to proactively identify areas of high risk from failing septic systems.
- Include the City's program to limit the use of applied chemicals, site design to minimize runoff from the landscaped surface, and development of a pesticide management plan. This could be addressed with an integrated pest management plan to reduce their application risk or a "no spray zones" policy for high-risk areas. Also consider implementing staff training and an E&O campaign that covers this issue.
- Describe the approach to required monitoring of industrial activities for nitrate, nitrite, ammonia, or phosphorus as applicable. If they do not apply, explain why. Are the 17 well sites monitored representative of the City's larger UIC network? Is this sample size statistically sufficient? This information should be noted in the UIC SWMP.
- If applicable for commercial and industrial sites, describe how the City addresses roofs with ventilation for indoor pollutants as well as outdoor handling or storage. If they do not apply, explain why.
- While often associated with maintenance, note if the City performs any line cleaning to remove legacy pollutant accumulation in conveyance pipes. Regarding the City's sweeping program, note if the City uses regenerative air sweepers.

SPILLS AND ILLICIT DISCHARGES (SWMMEW 5.6.14)

The UIC SWMP notes that the City responds to illicit connections on a case-by-case basis. Recommend connecting this to how the City addresses prohibitions. In addition, the UIC SWMP lacks descriptions for several program elements. Suggest adding language to the UIC SWMP that explains the following City approaches:

- Procedures for discovering illicit connections during inspection and maintenance.
- Deployment of SWMMEW's Chapter 8 spill control, prevention, and response measures.
- Approach for undertaking proactive inspection of residential areas, commercial, industrial, agricultural, institutional, construction sites, and activities that pose risk to discharging to UIC facilities.

- Programs designed to target IDDE screening and enhanced pollutant source tracing for areas and activities identified as high pollutant generating risk to UICs.
- Approach to deploying targeted E&O campaigns, including training to municipal staff, to support and improved effectiveness of source control programs, technical assistance, and other aspects involved in carrying out escalating enforcement measures.
- Coordination and collaboration with first responders during spill incidents.

In addition, include whether the City intends to continue to apply its MS4 Permit IDDE requirements to UIC wells or if they will modify this approach and, if so, the nature of those modifications.

DEEP UIC WELLS (SWMMEW 5.6.15)

In the event the City has or plans to allow deep UIC wells, the UIC SWMP needs to address them, including referencing the requirements in Section 5.6.15 of the SWMMEW. In the event that the City does not have deep UIC wells and intends to prohibit them, the UIC SWMP should state that.

DETERMINING TREATMENT REQUIREMENTS (SWMMEW 5.6.16)

The UIC SWMP section titled *Treatment Requirements - Presumptive Approach,* describes how the City determines treatment requirements. Consider moving the contents of this section to an appendix and replace it with a description of how the City determines treatment requirements, referencing the supporting information that was moved to an appendix.

CLASSIFICATION OF VADOSE ZONE TREATMENT CAPACITY (SWMMEW 5.6.17)

The UIC SWMP section titled *Treatment Requirements - Presumptive Approach*, describes the City's classification of vadose zone treatment capacity. Consider moving the contents of this section to an appendix and replace it with a description of how the City classifies vadose zone treatment capacity, referencing the supporting information that was moved to the appendix.

4.3 Summary of Needed Resources

Estimates of current and future staffing, equipment, and funding needs were documented through the work described in **Sections 4.1** and **4.2**. The City provided estimates based on their existing activities and the consultant team developed estimates for all recommendations for improvement or LOS goals above existing activities. The preliminary results were sent to the City and their comments were used to update the resource estimate shown in **Table 23**, broken down by stormwater element. Note the resource estimate summarized in **Table 23** was developed assuming the entire geographical area of the city was managed by the MS4 Permit. **Table 24** includes a summary of the FTEs in relation to the LOS. **Table 25** includes an FTE estimate assuming the City develops a separate MS4 and UIC SWMP. **Appendix G** provides a breakdown of the estimated FTE per stormwater element for each LOS goal along with the City and consultant team assumptions.

Table 23. MS4 Resource Estimate Summary

Requirement or Stormwater Element	Existing Programmed	Existing Not Programmed	Minimum Required	Proactive	2024 to 2029 Anticipated MS4 Permit Requirements
Current MS4 Phase II Permit Section	2.00	0.87	1.04	0.00	0.00
Anticipated MS4 Permit Requirements	0.00	0.00	0.00	0.00	0.46
UIC Rule	0.08	0.00	0.15	0.09	N/A
Stormwater Elements Not Regulated	2.05	0.62	1.27	3.96	N/A
Sub-Totals	**4.13**	**1.49**	**2.46**	**4.05**	**0.46**

Table 24. MS4 Only Resource Estimate Relative to LOS

Level of Service	Description of Level of Service	FTE
Existing	**Total Programmed Existing + Total Non-Programmed Existing**	**5.62**
Minimum Required	**Total Programmed Existing + Total Non-Programmed Existing + Minimum Required**	**8.07**
Minimum Required including Anticipated Permit	**Total Programmed Existing + Total Non-Programmed Existing + Minimum Required + Anticipated MS4 Permit**	**8.53**
Proactive	**Total Programmed Existing + Total Non-Programmed Existing + Minimum Required + Anticipated MS4 Permit + Proactive**	**12.58**

Table 25. MS4 and UIC SMWP Resource Estimate Summary

Requirement or Stormwater Element	MS4 SWMP Only	MS4 and UIC SWMP
	Existing + Minimum Required + 2024 to 2029 MS4 Permit Requirements	Existing + Minimum Required + 2024 to 2029 MS4 Permit Requirements
2019-2024 MS4 EWA Phase II Permit Section	3.90	1.60
2024-2029 Anticipated MS4 Permit Requirements	0.46	0.34
UIC Rule	0.23	2.65
Stormwater Elements Not Regulated	3.94	3.94
Sub-Totals	**8.53**	**8.53**

CHAPTER 5. STORMWATER SYSTEMS

In addition to documenting compliance with regulatory requirements, the Stormwater Utility is responsible for maintaining and operating all stormwater facilities and implementing small works and CIP for flood reduction and water quality protection. **Chapter 5** summarizes the City's infrastructure used for management and treatment of runoff, annual maintenance programs, CIPs, and the UIC Retrofit Program.

5.1 Infrastructure

The exact date of installation of much of the City's infrastructure is unknown. The City's predominant growth was between 1960 and 1980 when the population of Spokane County nearly doubled. Much of the City's infrastructure is assumed to have been built by the early 1980s. For estimating infrastructure replacement needs, the consultant team assumed the average age of the existing infrastructure is 40 years old. The average life expectancy for stormwater infrastructure is 50 years. To plan and budget for replacing the aging stormwater infrastructure, a Stormwater System (non-UIC) Replacement Project was added to the Capital Improvement Program (see **Section 5.2**). The following sections summarize the City's existing stormwater assets.

5.1.1. Underground Injection Control

UIC wells — also referred to as injection wells — are a type of well that discharges surface water into the subsurface via a driven shaft, dug hole, or distribution system. UICs make up the majority of stormwater infrastructure in the City. Due to the City's location above the SVRP Aquifer and the well-draining soils of the area, UIC technologies allow groundwater recharge while managing the City's stormwater runoff. Class V wells, also known as drywells, are one type of UIC technology which allows capture and infiltration of stormwater runoff. Drywells are concrete wells situated above the water table such that the bottom and sides are typically dry, except when receiving runoff. Drywells may vary in depth to increase the infiltration capacity of a given drywell. Pre-cast concrete barrels are added to a drywell to create double, triple, and even quadruple depth drywells. Each pre-cast barrel is approximately 4 feet, 4 inches in length. Drywells are the primary type of UIC used throughout the City, with a combined total of 7,606 drywells. **Table 26** shows a summary of drywells within the City.

Table 26. Spokane Valley UIC Drywells

Drywell Type	Quantity of Asset
Single Depth	3,112
Double Depth	4,371
Triple Depth	36
Quadruple Depth	3
Other	31
N/A	53
Total	**7,606**

5.1.2. Conveyance Pipes

Due to the well-draining soils underlying much of the City, most stormwater is conveyed by overland flow via curb and gutter to drywells, especially in residential areas. Because of this, piped conveyance within the City consists primarily of short connections from catch basins to drywells. On busier arterials or in areas of poorer-draining soils, flows are often collected with catch basins and then conveyed through a small pipe network to nearby drywells in areas of better infiltration. The majority of the stormwater pipe network in the City is pipe classified as 12-inch-diameter or less. Several pipes are listed as unknown diameter and will be identified in future condition assessments. The City estimates that 25 percent of the City's stormwater conveyance pipes still need to be inventoried. **Table 27** summarizes those stormwater conveyance pipes that have been inventoried. It should be noted that culverts are currently included in

the City's asset inventory as stormwater pipes. The consultant team recommends the creation of a new culvert asset as the City inventories its remaining stormwater conveyance infrastructure (refer to **Section 4.1** for all asset mapping recommendations).

Table 27. Spokane Valley Stormwater Pipes

Pipe Diameter (inches)	Current GIS Database Inventory Length of Pipe (linear feet)	Estimated Length of Pipe (linear feet)
4	489	611
6	1,332	1,415
8	8,474	10,593
10	20,395	25,494
12	54,999	68,749
14	1,512	1,890
15	3,056	3,820
16	2,920	3,650
18	21,756	27,195
22	150	188
24	11,859	14,824
25	87	109
30	2,242	2,803
36	2,492	3,115
42	247	309
60	58	73
Unknown	57,336	71,670
Total	**189,404**	**236,755**

5.1.3. Culverts and Ditches

Conveyance ditches are most commonly found in the City's outer limits located around the foothills to the Dishman and Mica areas. The City's GIS inventory includes 271 different ditch segments, totaling approximately 11.6 linear miles. The City estimates that 80 percent of the ditches are inventoried.

5.1.4. Other Stormwater Structures

The City's GIS inventory includes manholes and catch basins, most of which are associated with UICs. The City estimates that 15 percent of structures such as manholes and catch basins still need to be inventoried. The GIS database from the City did not include a breakdown of the manhole structure sizes or the lid configuration. **Table 28** summarizes the City's stormwater structures inventory.

Table 28. Spokane Valley Stormwater Structures

Structure Type	Current GIS Database Inventory Quantity	Estimated Inventory Quantity
Manholes	187	215
Catch Basins	4,346	4,998
Total	**4,533**	**5,213**

5.1.5. Pump Stations

There are three lift stations within the City and are included in the City's GIS inventory. **Table 29** provides a summary of the locations and details of the pump stations. A proposed CIP aims to create an Asset Management Plan for each of these three pump-station locations, which would assess pump conditions and establish a regular maintenance schedule. This project is described in greater detail in **Section 5.2**.

Table 29. Spokane Valley Pump Stations

Pump Station Location	Number of Pumps	Discharge Location	Housing
N Argonne Road and E Trent Ave	4	Grass Swale to Drywell	Double vault
E Sprague Ave near S Dishman Mica Road Intersection	2	Grass Swale	Single vault
Sprague Ave and S Best Road	2	Grass Swale to Drywell	Double vault

5.1.6. Water Quality Treatment Facilities (Swales and Cartridge Units)

Water quality treatment facilities in the City consist of landscaping swales and ponds as well as other water quality BMPs such as media filter cartridges. Landscaping swales and ponds are located throughout the city while media cartridge filters can be found along E Broadway Ave from N Yardley St. to N Howe St. According to the City's database, there are approximately 145 acres of ponds and swales within the City's boundary. Approximately 108 of the 145 acres are maintained by the City. The remaining swales and ponds are managed by the Washington Department of Transportation (WSDOT), Spokane County, or private developers. Along Sprague Ave there are three water quality vaults. Each vault contains 9 media cartridge units, totaling 27 media cartridges. Lastly, there are eight Contech CDS hydrodynamic separators located in eight catch basins along both E Sprague Ave and E Wellesley Ave. Recommendations for mapping of water quality facilities can be found in **Section 4.2**.

5.2 Stormwater Capital Improvement Program

Since its inception the Stormwater Utility has maintained a capital improvement program. The program includes CIPs to reduce flood hazards; protect and improve water quality of the aquifer; and enhance aquatic stream, wetland, and shoreline areas that are potentially impacted by stormwater runoff. The consultant team reviewed historical CIPs identified by the City and, together with City input, refined the list. One significant refinement was to separate any UIC-related projects, recommending a stand-alone UIC Retrofit Program to manage the City's 7,600-plus drywells, protect the aquifer, and stay compliant with Ecology's UIC Rule requirements (**Section 5.3** further describes the proposed UIC Retrofit Program). The remainder of the projects were named as CIPs and were redefined as part of the overall Master Plan. CIP refinement and prioritization is discussed in the following sections.

5.2.1. Capital Improvement Project Refinement

The CIPs discussed in this section were identified based on 2022 readily available data and are subject to change based on emergency drainage issues and development of the City's budget. The prioritization and refinement of CIPs was conducted for long-term planning and forecasting purposes only.

The majority of the CIPs were previously identified by the City, however, as part of the consultant team's review and refinement, several additional projects were added to address areas of improvement, which was determined through assessment of the Stormwater Utility. This resulted in a total of 11, one-time CIPs and three annual programs that are included in the Stormwater Capital Improvement Program. A general location map and a list of these projects are shown in **Appendix H**.

A brief list and description of additional projects added to the Stormwater Capital Improvement Program are described below. These projects are recurring programs that will require annual funding and coordination.

- **Stormwater System Replacement Project**: will set aside an annual budget used to address aging stormwater infrastructure, including replacement of failing and non-standard structures, pipes, and ditches to prevent pollutant discharges and surface flooding. All calculations for asset replacement costs and quantities to be replaced with the annual budget can be found in **Appendix I**.
- **Spot Drainage Improvements – Small Works Project**: will set aside an annual budget to be used to address spot drainage improvements (projects with construction contracts less than $350,000). Small work projects typically include repairs for failing and damaged structures and facilities, erosion conditions, and ponding on roadways. Small works projects are identified through inspections by city staff and citizen complaints (tracked with the City's software system, Q-Alerts).
- **MS4 Service Area Stormwater Retrofit**: will set aside an annual budget adequate to plan, design, and construct stormwater retrofit projects every permit cycle (5 years). It is anticipated that stormwater retrofits will be required with the new Ecology NPDES Permit. These retrofits are aimed at improving water quality.

The consultant team developed CIP fact sheets to summarize each project type, general location, schedule, cost, and possibility for grant funding. For the City's historical projects, this included updating the project type and project descriptions to be more specific including additional details gathered from conversations with City program leads. Maps were developed for each project identifying the location of the project as well as existing infrastructure near the project limits. The CIP fact sheets and maps can be found in **Appendix J**.

5.2.2. Development of Capital Improvement Project Costs

Costs for many of the capital projects were originally developed by the City in 2015. The consultant team took those costs and applied escalation factors to account for price increases and inflation, based on historical City of Seattle pricing data of publicly bid projects. Although, the City of Seattle pricing data is not local, Seattle's detailed record keeping and tracking of bid pricing escalation provided a conservative estimate that could be easily applied. The resulting costs for each project are presented in 2022 dollars in **Table 30**. All calculations and backup data for the cost escalations can be found in **Appendix I**.

5.2.3. Stormwater Capital Improvement Project Prioritization and LOS

The consultant team developed a prioritization rubric with several evaluation criteria to prioritize CIPs. The evaluation criteria considered the following:

- O&M
- Risks of continued drainage issues
- Public benefit
- Environmental benefit
- Compliance with stormwater requirements
- Construction and schedule risks

Together, the City and consultant team developed CIP evaluation criteria and individually scored CIPs. Each project was assigned a score by the City from 1 to 3 in each of the evaluation criteria categories. A project's assigned score was determined relative to the other proposed CIPs. Each evaluation criteria was assigned a weight given the criteria's importance to the City (**Appendix K**) and summed to identify individual CIP prioritization scores, as shown on **Figure 5-1**. A graphical representation of the CIP averaged prioritization scores and total CIP costs can be seen on **Figure 5-2**.

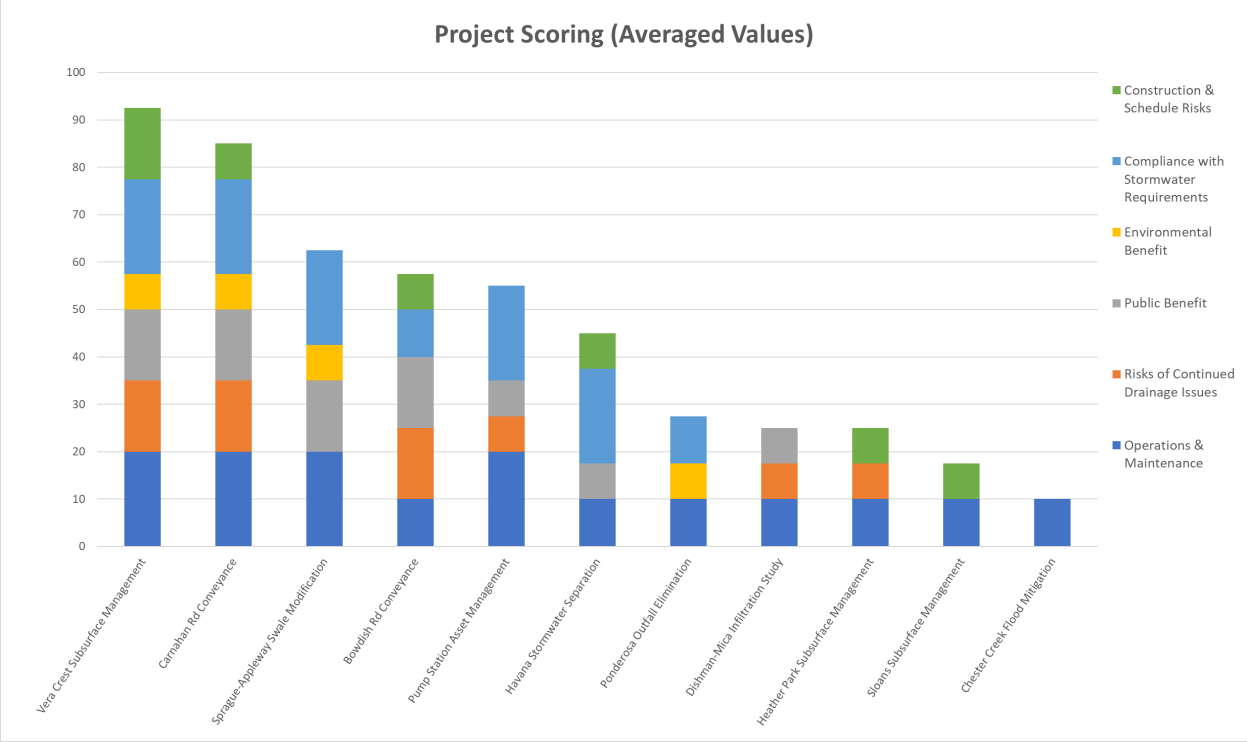


Figure 5-1. Averaged Prioritized Rankings by Consultant Team and City Staff

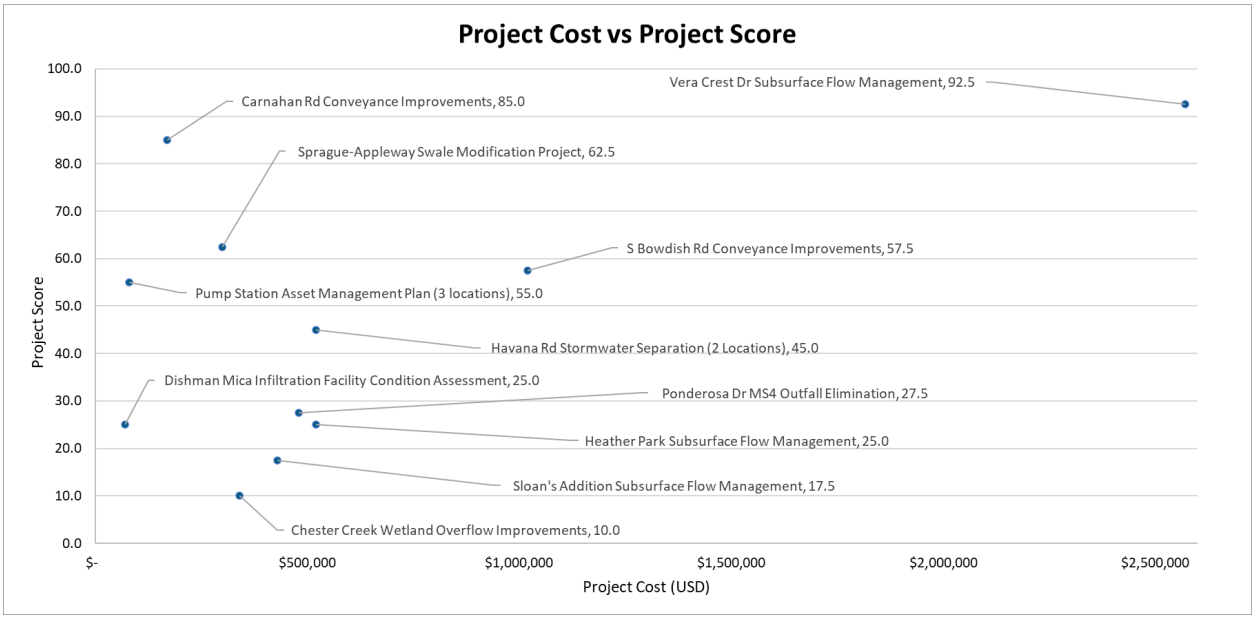


Figure 5-2. CIP Project Cost versus Value Score

The final averaged prioritization scores were used to assign priority rankings from 1 to 11. Project costs were formulated using the existing 2015 CIP costs and escalated to 2022 dollars as described in **Section 5.2.2**. **Table 30** shows the projected cost of each CIP cost as well as the priority ranking. The assigned priority rankings for each project were used to develop the CIP construction schedule through the rate study. The final CIP schedule is discussed in **Chapter 7**.

Table 30. One-Time Stormwater Capital Improvement Project Costs and Final Prioritization Ranking

LOS Tier	CIP ID	Stormwater Capital Improvement Project	Project Cost (2022 $)	Priority Rank
Minimum Required	SFM-1	Vera Crest Dr. Subsurface Flow Management	$2,570,000	1
Minimum Required	SWC-2	Carnahan Rd Conveyance Improvements	$170,000	2
Minimum Required	O&M-4	Sprague-Appleway Swale Modification Project	$300,000	3
Minimum Required	SWC-1	Bowdish Rd Conveyance Improvements	$1,020,000	4
Minimum Required	O&M-1	Pump Station Asset Management Plan (three locations)	$80,000	5
Minimum Required	SWS-1	Havana Rd Stormwater Separation (two locations)	$520,000	6
Proactive	OE-1	Ponderosa Dr. MS4 Outfall Elimination	$480,000	7
Proactive	SFM-3	Heather Park Subsurface Flow Management	$520,000	T-9 (tied)
Proactive	FM-1	Dishman Mica Infiltration Facility Condition Assessment	$70,000	T-9 (tied)
Proactive	SFM-2	Sloan's Addition Subsurface Flow Management	$430,000	10
Proactive	FM-2	Chester Creek Wetland Overflow Improvements	$340,000	11

Notes:
FM – flood mitigation
OE – MS4 outfall elimination
O&M – operations and maintenance
SFM – subsurface flow management
SWC – surface water conveyance
SWS – stormwater separation
WQ – water quality

Table 31. Annual Stormwater Capital Improvement Project Costs and LOS

CIP ID	Project Name	Level of Service	Project Cost (2022 $)
O&M-3	Spot Drainage Improvements – Small Works Projects	Existing	$100,000
		Minimum Required	$150,000
		Proactive	$300,000
WQ-1	MS4 Service Area Stormwater Retrofit	Existing	$0
		Minimum Required	$250,000
		Proactive	$250,000
O&M-2	Stormwater System (Non-UIC) Replacement Projects	Existing	$100,000
		Minimum Required	$200,000
		Proactive	$200,000

Notes:
CIP ID – Capital Improvement Project Identification
MS4 – Municipal Separate Storm Sewer System
UIC – underground injection control

As shown in **Table 30** and **Table 31**, the assigned priority rankings for each project were used to develop the Stormwater Capital Improvement Plan LOS. The schedule and financing for implementation of the Stormwater Capital Improvement Plan is discussed in **Chapters 6** and **7**.

5.3 UIC Retrofit Program

The UIC Retrofit Program is a new program developed for two primary reasons: 1) most stormwater runoff within the City is managed and infiltrated via more than 7,600 UICs, and 2) some of these UICs are considered a high threat to groundwater due to direct subsurface discharge. As discussed in **Section 2.2.2**, the UIC Rule governs the authorization and operation of UICs. The City conducted a UIC assessment (well assessment) for all UICs within the City's jurisdiction. The City's new UIC Retrofit Program used the well assessment to develop an implementation schedule and establish a direct funding source for retrofitting UICs that posed a high threat to groundwater. Further, planned UIC retrofit projects originally listed in the City's CIP list were removed from that list and became a part of the UIC Retrofit Program which is discussed in greater detail in **Section 5.3.3**. The well assessment and resulting UIC Retrofit Program is summarized in the following sections.

5.3.1. UIC Well Assessment and Retrofit Prioritization

A well assessment was conducted by the City to determine the threat to groundwater of all City-owned UICs (Spokane Valley 2013). The well assessment was conducted through a desktop GIS analysis of readily available data relating to pollutant-generating factors. Per the City's UIC Assessment and Retrofit Plan Report (Spokane Valley 2013), the following criteria was considered in the analysis:

- Protection of UIC by an existing upstream facility providing basic or enhanced treatment
- Adjacent land uses – high-density apartments, commercial, industrial areas, etc.
- Average daily traffic with threshold counts greater than 7,500 and 30,000
- Signal-regulated and/or high-density intersections
- Proximity to possible pollutant generator(s) as listed by Ecology's regulated facility database
- Proximity to Class A or Class B culinary water wells
- Proximity to identified surface water bodies such as streams, rivers, lakes, and wetlands

Through this assessment, a pollution score was generated for each drywell, then normalized based on existing stormwater pretreatment BMPs (where applicable). The City assigned any UICs with bioinfiltration pretreatment a value of 0 (i.e., the UIC meets current SRSM standards) and UICs that have pretreatment to meet the non-endangerment standard, a value of 1. Other pretreatment methods were given an arbitrary reduction score as well. A total score was then attributed to each City-owned drywell, indicating level of priority for retrofit (0 to 9, with 9 being the highest priority based on potential pollutant loading to groundwater). Four total categories were developed (Spokane Valley 2021 and 2013). **Figure 5-3** shows the results of the analysis. Each slice within the pie chart in **Figure 5-3** represents the number and percent of drywells in each retrofit priority category.

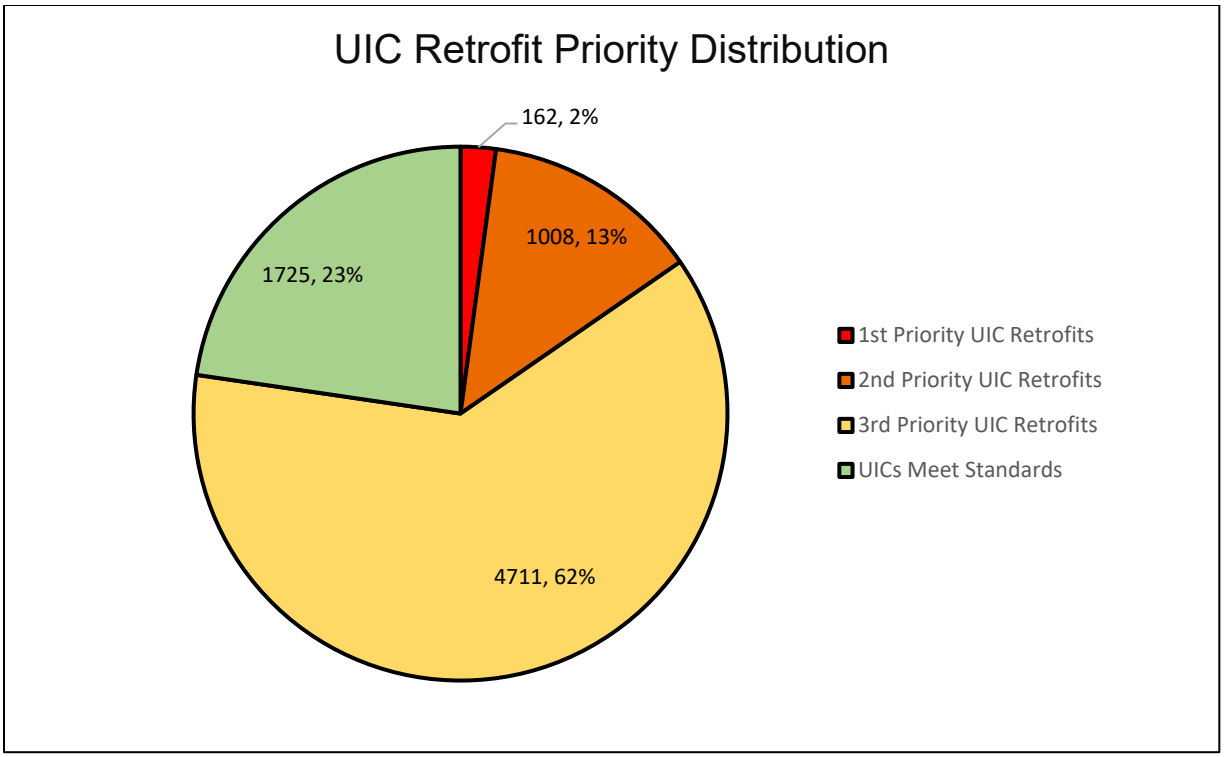


Figure 5-3. UICs Retrofit Priority Distribution

Per the analysis conducted by the City, approximately 162 drywells, or 2 percent of all drywells, received a score greater than 6 indicating the highest threat to groundwater. These drywells, highlighted in red in **Table 32**, have been prioritized by the City for retrofit according to WAC 173-218-090. **Table 32** shows a summary of the scoring distributions.

Table 32. Citywide UIC Retrofit Priority

	1st Priority UIC Retrofits	2nd Priority UIC Retrofits	3rd Priority UIC Retrofits	UICs Meet Standards No Retrofit Required
Number of UICs	162	1008	4711	1725
Percentage	2.13	13.25	61.94	22.68

5.3.2. Retrofit Strategy for High Threat to Groundwater UICs

To meet the requirements of the UIC Rule, the City has developed a schedule for retrofitting those drywells determined to be a high threat to groundwater. In accordance with the LOS discussed in **Section 3.4**, two retrofit schedules were initially developed, with the overall strategy of retrofitting an average number of high-priority drywells per year and a longer-term goal of retrofitting all high-priority drywells. In addition to targeting high-priority drywells, the City will also track the amount of "pollutant points" reduced throughout the UIC Retrofit Program. The City's goal is to reduce the average pollutant score of all drywells within the City to a value of 4 or less.

Of existing drywells, 162 were determined to be a high threat to groundwater through the City's well assessment. Due to the large number of drywells requiring retrofit, a systematic approach was needed to estimate the costs to implement the UIC Retrofit Program. To estimate the total cost of implementing the UIC Retrofit Program, Ecology's presumptive approach was used to determine the appropriate retrofit for each drywell. Correspondingly, drywells with high threat to groundwater (drywells with scores greater than

6, per the well assessment) will presumably be retrofit to the level of treatment required to meet the non-endangerment standard. With these assumptions, costs for an applicable "unit" BMP meeting these requirements were estimated and applied to each high-priority drywell. The detailed unit BMP cost justification is shown in **Appendix L**.

The cost for the unit BMP was determined by scaling down the recent Sprague Avenue Retrofit Design Report cost estimate (OCI 2022):

- Increased cost due to a cost-efficiency loss for quantities of scale (additional 50 percent)
- Escalated to 2022 material costs as the report was finalized with 2021 costs (additional 6 percent)
- Added contingency to allow for further design and planning (additional 15 percent)

Costs for the Sprague Avenue Retrofit Project were based on construction bid tabs from the recent Appleway Boulevard Phase 1 and 2 Improvements.

Table 33 shows that the total cost to implement the UIC Retrofit Program was estimated at approximately $14,158,800.

Table 33: UIC Retrofit Program

Level of Service	Total Cost (2022 $)	Average Retrofits/Year	Years to Implement	Cost/Year (2022 $)	Average Point Reduction/Year
LOS 1 Existing	–	–	–	–	–
LOS 2 Minimum Required	14,158,800	5	40	353,970	25
LOS 3 Proactive	14,158,800	9	20	707,940	50

Table 33 illustrates that the annual required budget will change based on the desired LOS, the number of retrofits per year, and associated program implementation schedule. Because the UIC Retrofit Program is a new program, there is no allocated funding under the existing LOS.

Of note, currently no codes or standards govern the level of treatment required for retrofitting an existing drywell. Further, although the cost estimate developed for the UIC Retrofit Program assumed the most conservative retrofit (i.e., meeting the non-endangerment standard), specific site and project constraints will dictate the type of BMP most applicable. This approach was taken so that the City can have a funding source to retrofit drywells up to current water quality standards, while still maintaining flexibility to allow for site specific stormwater retrofit design.

5.3.3. UIC Retrofit Projects and Point Strategy

Seven UIC retrofit projects were identified by the City for implementation of the UIC Retrofit Program and point strategy. These projects were initially on the City's list of potential CIPs; however, separating the UIC retrofit projects from CIPs to demonstrate regulatory compliance is believed to offer more transparent financial tracking of UIC retrofit projects. These UIC retrofit projects include projects that may capitalize on interdepartmental work and grant or partnership funding opportunities. Based on information provided by the City, project limits were mapped in GIS for each of the seven projects identified to determine the UIC priority rankings and total number of UICs that would be retrofitted by each project. From this analysis, a corresponding unit BMP was assigned to each UIC (per pollutant loading and presumptive approach) and a total project cost was estimated. A summary of the UIC retrofit projects is shown in **Table 34**.

Table 34: UIC Retrofit Projects

				UICs Retrofit by Priority		
Project Name	**Estimated Cost in $**	**Anticipated Point Reduction [1]**	**Average Cost Per Point in $**	**1st**	**2nd**	**3rd**
Sprague Ave SW Retrofits	4,698,400	291	16,170	3	56	11
Appleway SW Improvements Phase 3	1,909,800	94	20,320	0	9	11
N Argonne Rd SW Retrofits	228,400	16	14,275	0	4	0
NW Yardley SW Retrofits	1,398,400	95	14,720	5	11	0
NE Yardley SW Retrofits	6,030,600	435	13,865	18	51	11
Dishman-Mica SW Retrofits	1,822,400	115	15,850	0	17	17
E Montgomery SW Retrofits	3,454,000	269	12,845	18	26	0

Note:
[1] Assumes all UICs will be retrofit within the project limits to levels which meet the non-endangerment standard through Ecology's presumptive approach

As shown in **Table 34**, a higher anticipated point reduction corresponds with a lower cost per point for each project. Further, this information can be used by the City to efficiently prioritize and select UIC retrofit projects. UIC Retrofit Project fact sheets and maps can be found in **Appendix M** and detailed breakdown of UIC retrofit project costs are found in **Appendix N**.

CHAPTER 6. FINANCING AND RATES

6.1 Introduction

The City asked the consultant team to perform a Stormwater Utility rate study. The objective of the rate study was to develop a funding plan ("revenue requirement") for the City's Stormwater Utility for the 2022 to 2036 study period. The report documented rate impacts associated with two LOS: Minimum Required and Proactive.

For each LOS, the revenue requirement identified the total rate revenue needed to fully fund the Stormwater Utility on a stand-alone basis, which considered staffing (**Section 4.3**), O&M expenditures, capital funding needs identified in the City's Stormwater Capital Improvement Program (**Section 5.2**), and identified fiscal policies (**Appendix O**).

The methods used to establish user rates are based on principles that are generally accepted and widely followed throughout the industry. In 2006, the City implemented an annual Stormwater Utility fee of $21 per equivalent residential unit (ERU); which has not increased since that time. The LOS were designed as two alternatives for funding the Stormwater Utility.

6.2 Results

Based on the capital plan discussed in **Chapter 5**, and the staffing and programmatic plans discussed in **Chapter 3** and **Chapter 4,** the following annual rate plans were developed for the Minimum Required and Proactive LOS.

Minimum Required. The Minimum Required LOS requires increasing the annual rate per ERU from $21.00 in 2022 to $44.52 in 2023, which is an increase of roughly $2 per month. This LOS funds approximately $23.3 million for CIPs inflated to the year of construction (2022 to 2036) and provides funding for up to 4.4 additional FTEs for a total of 8.5 total stormwater FTEs. **Table 35** shows the rate increases to achieve the Minimum Required LOS from current rates to year 2030.

Table 35: Minimum Required Level of Service: Rate Increases

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate per ERU	$21.00	$44.52	$45.86	$47.23	$48.65	$50.11	$51.61	$53.16	$54.75
Annual Increase		$23.52	$1.34	$1.38	$1.42	$1.46	$1.50	$1.55	$1.59
Equivalent Monthly Increase		$1.96	$0.11	$0.11	$0.12	$0.12	$0.13	$0.13	$0.13

Proactive: The Proactive LOS requires an increase to $57.96 per year per ERU in 2023, which is an increase of roughly $3 per month. This LOS funds approximately $35.0 million for CIPs inflated to the year of construction (2022 to 2036) and provides funding for up to 4.1 additional FTEs above the Minimum Required LOS for a total of 12.6 total stormwater FTEs. **Table 3**6 shows the rate increases adopted by the City Council, that will achieve the Proactive LOS from current rates to year 2030.

Table 36: Proactive Level of Service: Rate Increases (Adopted by City Council)

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate per ERU	$21.00	$57.96	$59.70	$61.49	$63.33	$65.23	$67.19	$69.21	$71.28
Annual Increase		$36.96	$1.74	$1.79	$1.84	$1.90	$1.96	$2.02	$2.08
Equivalent Monthly Increase		$3.08	$0.14	$0.15	$0.15	$0.16	$0.16	$0.17	$0.17

6.3 Council Action

On November 8, 2022, the City Council approved a motion to adopt the Proactive LOS, including adopting a 2023 annual rate per ERU of $58.00.

6.4 Single-Family Residential Rate Comparison

As a resource to the City and its customers, a rate survey of eastern Washington Stormwater Utilities was conducted. **Figure 6-1** shows the 2022 monthly single-family residential stormwater bills of several jurisdictions, as well as Spokane Valley's 2022 existing and 2023 rates for both LOS. The City's 2022 monthly equivalent rate is $1.75 and is among the lowest in the survey group. This would increase to $3.71 in 2023 for the Minimum Required LOS or increase to $4.83 in 2023 for the Proactive LOS.

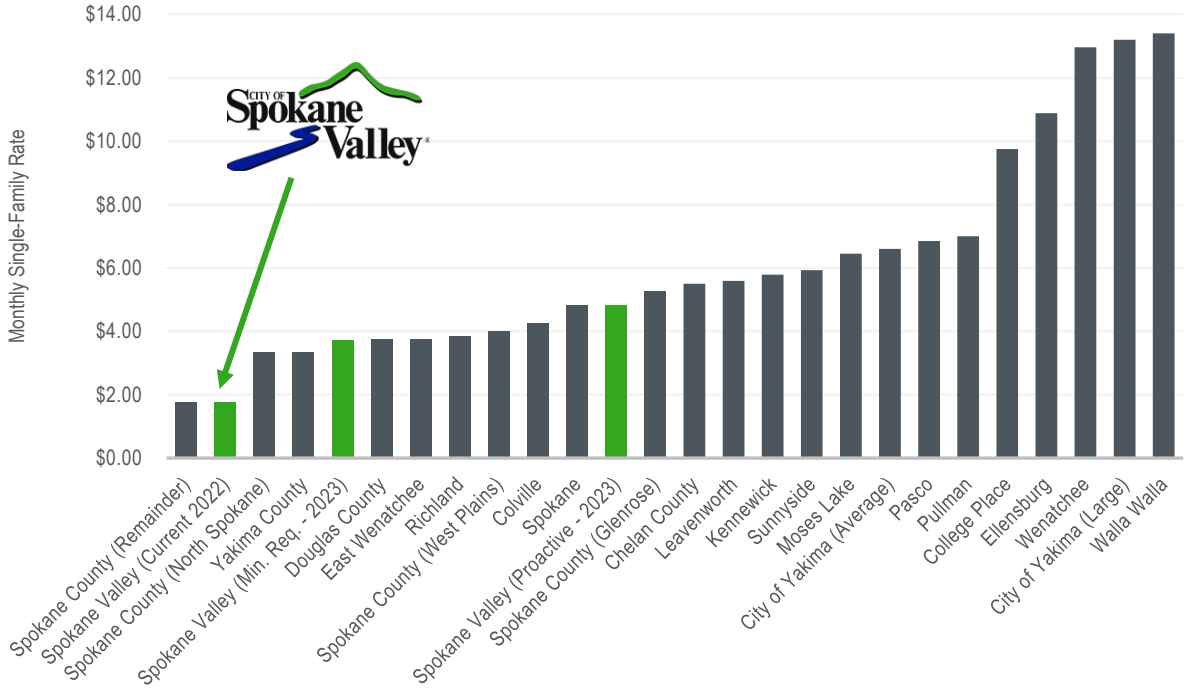


Figure 6-1: Jurisdictional Survey – Monthly Single Family Stormwater Rates

CHAPTER 7. EXECUTION PLAN AND NEXT STEPS

Section 1.7 described the process in which the Stormwater Utility staff and the consultant team presented the LOS and rate study results to the City Council in October 2022; ultimately recommending the implementation of the Proactive LOS. The Proactive LOS includes the following basic items to proactively manage stormwater:

- Programs that meet current and anticipated regulatory requirements
- Replacement of failing/aging infrastructure to reduce future O&M costs and avoid costly repairs
- 15-year plan for implementing high-priority stormwater CIPs
- 20-year implementation plan for retrofitting UICs that pose a high threat to groundwater

City Council approved the recommendation to proceed with the Proactive LOS for the programs, projects, and associated rates developed through this Master Plan. A summary of the implementation schedule and plan is discussed in the following sections.

7.1 Policy and Program Recommendations

The Proactive LOS includes 49 high-priority and 7 medium-priority programmatic/procedural actions. These programs and policy actions should be implemented to meet current and anticipated regulatory requirements and streamline existing processes. The summary below includes the major programs and policy updates for the MS4 area. **Appendix P** summarizes all program recommendations from the gap analysis and provides an implementation schedule.

Current MS4 Regulatory Requirements

Overall Stormwater Management Program

- **SWMP Tracking Program:** An ongoing program for tracking the status and cost for developing and implementing each SWMP component listed in Section 5 of the MS4 Permit.
- **SWMP Public Feedback Policy:** A policy for ongoing opportunities for the public to participate in the development and updates of the annual SWMP.

Education and Outreach

- **E&O Program for Engineers, Construction Contractors, Developers, Development Review Staff, and Land Use Planners:** A specific program for providing information to engineers, construction contractors, developers, development review staff, and land use planners regarding technical standards, infiltration and UIC criteria, LID, stormwater BMPs, and City municipal stormwater code requirements.

Illicit Discharge Detection and Elimination

- **IDDE Inspection Program**: A program for IDDE inspections including assessing outfalls, discharge points, or facilities serving high-priority areas identified in S5.B.3.c.ii. These activities may be performed in conjunction with the City's routine inspections of the MS4 system. The program should include a process to track inspections and maintain documented inspection results. Formal procedures for eliminating discharges, including technical assistance, follow-up inspections, and the use of a compliance strategy including escalating enforcement should be developed and documented. Lastly, the program should include training with the following three components, at minimum: 1) training specifically for all municipal field staff that may come into contact with or observe any illicit discharge or illicit connection to the MS4 system; 2) training for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges; and 3) as needed follow-up training to address changes in procedures, techniques, requirements, or staffing.

Construction Site Stormwater Runoff Control

- **Inspection of Construction Sites with High Potential for Sediment Transport Policy**: A policy to determine sites with high potential for sediment transport during site plan review. The policy should also include inspecting sites with high potential for sediment transport prior to clearing and grading for construction.

Post-Construction Stormwater Management

- **City Owned, Operated, or Maintained Stormwater Facility Inspection Program**: A program for inspecting City owned, operated, or maintained stormwater treatment and flow control facilities in the MS4 area once every 2 years. The program should include developing an inspection schedule, as well as a formal process for documenting, tracking, and maintaining inspection records.
- **Catch Basin Inspection Program**: A program for inspecting all catch basins and inlets owned or operated by the City within the MS4 area every 2 years. The program should include developing an inspection schedule, as well as a formal process for documenting, tracking, and maintaining inspection records.
- **Structural BMPs Inspection Program**: A program for inspecting all structural BMPs, including those on private property, at least once every 5 years, or more frequently if needed. The program should include developing an inspection schedule, as well as a formal process for documenting, tracking, and maintaining inspection records. In lieu of inspecting BMPs on private property, the City may require private property owners to provide annual certification by a qualified third party that adequate maintenance has been performed and the BMPs are operating as designed to protect water quality.

Anticipated MS4 Regulatory Requirements

Anticipated regulatory requirements for the 2024 to 2029 MS4 Permit are listed in **Table 21** in **Section 4.2.2.5**. The requirements were identified based on Ecology discussions during the permit reissuance listening sessions. Formal drafts of the upcoming permit are expected to be released in summer 2023 with the new permit going into effect summer 2024. The City should review the final 2024 to 2029 MS4 Permit when it is released and develop an implementation plan based on the actual new requirements.

UIC Rule

- **UIC SWMP:** Upon completion of the City's MS4 and UIC area modeling efforts, implementing the content described in **Section 4.2.3** is recommended to finalize the UIC SWMP. There is not a specific timeline or schedule for implementing this program; however, the UIC SWMP should be finalized before the MS4 and UIC areas are officially separated.

7.1.1. Staffing Needs

The following is a summary of the staffing needs by LOS goal and a suggested timeline for hiring:

- Minimum Required – Hiring an additional 2.50 FTEs as soon as possible to assist the City with compliance and maintain functionality of the existing stormwater infrastructure.
- Anticipated Permit Requirements – Hire an additional 0.50 FTEs prior to the implementation of the 2024 to 2029 MS4 Permit on August 1, 2024.
- Proactive – Hire an additional 4.0 FTE to implement the activities outlined in Appendix D. Staging hiring staff is dependent upon when these programs are executed.
- Upon completion of the updated MS4 and UIC O&M Plans, the City should reevaluate their existing service contracts to determine if changes are required based on the separation of the MS4 and UIC areas.

7.2 Stormwater Capital Improvement Projects and UIC Retrofit Program

The Proactive LOS includes 14 projects: 9 one-time construction projects, 4 programs with annual projects, and 2 studies/plans. These projects are high-priority construction projects and studies that help the City meet regulatory requirements and replace failing and aging stormwater infrastructure. A summary of the CIPs in the Proactive LOS is shown in **Table 37**.

Table 37. Summary of Proactive Level of Service Stormwater CIPs

CIP Identification[1]	Stormwater Capital Improvement Project	15-Year CIP Cost[2]	Schedule[3]
SFM-1	Vera Crest Dr. Subsurface Flow Management	$2,570,000	2023 to 2025
SWC-2	Carnahan Rd Conveyance Improvements	$170,000	2026 to 2027
O&M-4	Sprague–-Appleway Swale Modification Project	$300,000	2028 to 2029
SWC-1	Bowdish Rd Conveyance Improvements	$1,020,000	2030 to 2031
O&M-1	Pump Station Asset Management Plan (three locations)	$80,000	2032 to 2033
SWS-1	Havana Rd Stormwater Separation (two locations)	$520,000	2034 to 2035
OE-1	Ponderosa Dr. MS4 Outfall Elimination	$480,000	2026 to 2027
SFM-3	Heather Park Subsurface Flow Management	$520,000	2028 to 2029
FM-1	Dishman Mica Infiltration Facility Condition Assessment	$70,000	2031 to 2032
SFM-2	Sloan's Addition Subsurface Flow Management	$430,000	2033 to 2034
FM-2	Chester Creek Wetland Overflow Improvements	$340,000	2035 to 2036
O&M-3	Spot Drainage Improvements – Small Works Projects	$4,200,000	Ongoing
WQ-1	MS4 Service Area Stormwater Retrofit	$3,500,000	Ongoing
O&M-2	Stormwater System (Non-UIC) Replacement Projects	$2,800,000	Ongoing
--	UIC Retrofit Program	$9,911,160	Ongoing

Notes:
(1) CIPs are shown in order of prioritization based on the analysis and information presented in Chapter 5.
(2) Costs are shown in 2022 dollars and include total project cost for design, permitting, and construction.
(3) Years shown indicate estimated duration of design, permitting, and construction.

7.3 Stormwater Rate Fees

The rate study determined the required revenue to implement the Minimum Required or Proactive LOS. The Proactive LOS requires an increase to $57.96 per year per ERU in 2023, which is an increase of roughly $3 per month. This will allow the Stormwater Utility to independently fund the Proactive LOS programs and projects as discussed throughout this Master Plan. **Figure 7-1** graphically represents the revenue requirement forecast through 2036.

- Solid black line: Revenue at existing rates.
  - Rate revenue is expected to be roughly $2.0 million in 2022 and is expected to grow 1.0% per year with customer growth. The APA revenue is assumed to sunset in 2025 in this scenario.
- Dashed black line: Revenues with rate increases.
  - Rate revenue must increase to allow the Stormwater Utility to cover its existing financial obligations while also funding CIPs. These rate increases start in 2023.
- Dark blue bar: 2022 Budget plus Inflation
  - Operating expenses are based on the adopted 2022 budget and increase with the annual cost escalation assumptions previously discussed.
- Green bar: Additional FTEs and Operating Costs from LOS.
  - The Proactive LOS incorporates funding for 4.05 FTEs above the Minimum Required LOS, for a total of 12.59 FTEs (in addition to the 4.13 FTEs already funded by the stormwater program plus the 4.41 added in the minimum LOS). It also adds recurring program costs of approximately $70,000 annually, plus inflation, to the Minimum Required LOS, for a total of $430,000 in programmatic costs.
- Gold bar: Cash available for capital (i.e., rate funded capital).
  - In 2023, roughly $1.9 million is available for rate funded capital. With rate increases, this amount is projected to increase to $3.1 million by 2036.
- Dark green bar: Additions to reserves.
  - As operating costs increase over time, a small amount each year is assumed to be added to reserves to keep up with the operating reserve target.

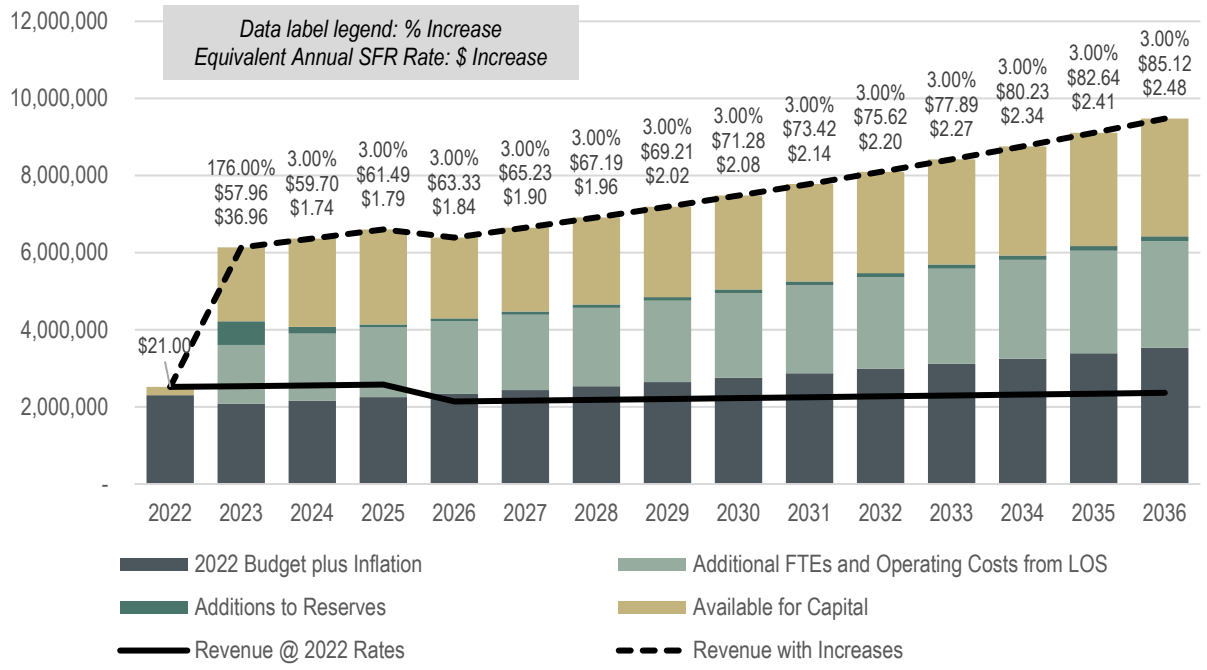


Figure 7-1: Proactive LOS: Annual Revenue Requirement Forecast 2022 to 2036

7.4 Conclusion

The City hired the consultant team to conduct a gap analysis of the Stormwater Utility Program and develop a Master Plan for managing stormwater within the City limits. The City examined two separate LOS developed by the consultant team. Each LOS considered stormwater O&M needs, capital improvements, and current and future regulatory requirements. Both LOS require increases to the rates; however, the Proactive LOS is the most substantial rate increase. On November 8, 2022, the City Council approved the Proactive LOS. The Proactive LOS will allow the City to streamline existing processes and replace aging infrastructure in addition to meeting current and anticipated regulatory requirements and address failing stormwater infrastructure.

The Proactive LOS Stormwater Utility rates will go into effect starting in 2023, with a $3 per month increase per ERU, followed by an estimated $2 annual increase to account for reasonable inflation.

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APPENDIX A

Education, Outreach, and Survey Results

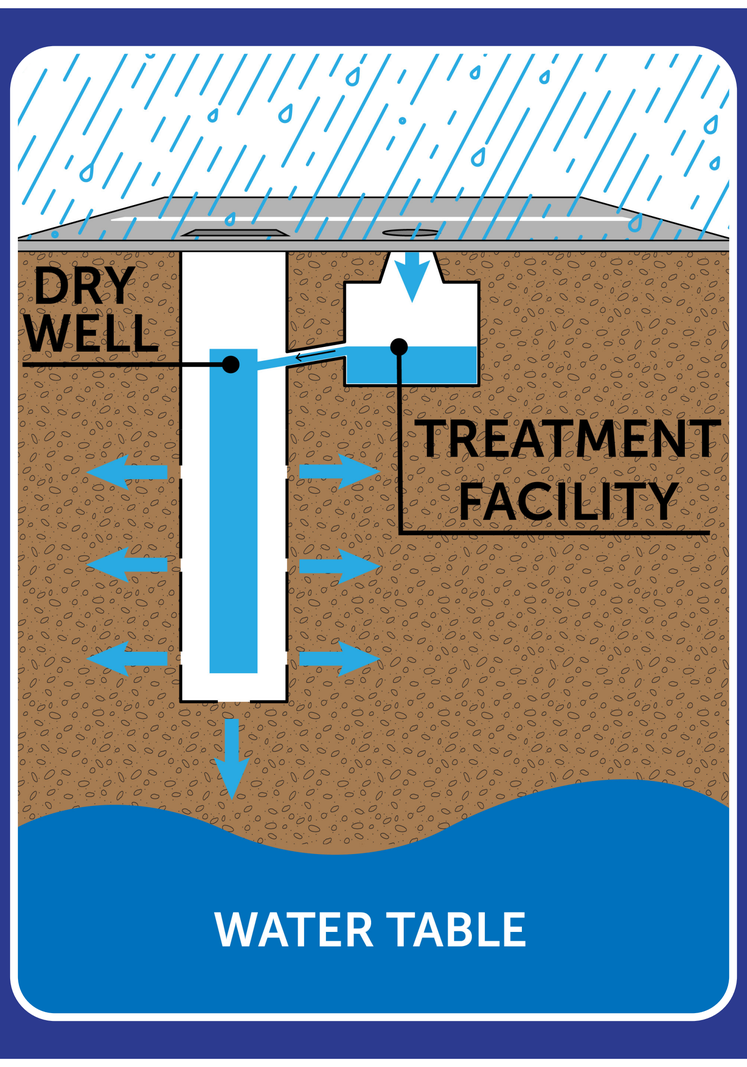
Stormwater Utility Fee

What is Stormwater?

Stormwater runoff is rainfall or snow melt that flows over the ground surface.

Stormwater runoff is created when rain falls on roads, driveways, parking lots, rooftops, and other paved surfaces that do not allow water to soak into the ground.

As stormwater runs off these surfaces, pollutants such as dirt and gravel, heavy metals, oil and hydrocarbons, fertilizers, and pesticides are collected.



In the City of Spokane Valley, the majority of runoff is discharged into the ground through natural dispersion or is collected and conveyed to treatment facilities and/or drywells.

This discharge into the ground recharges the Spokane Valley - Rathdrum Prairie Sole Source Aquifer that provides drinking water and irrigation to approximately 500,000 people in the region.

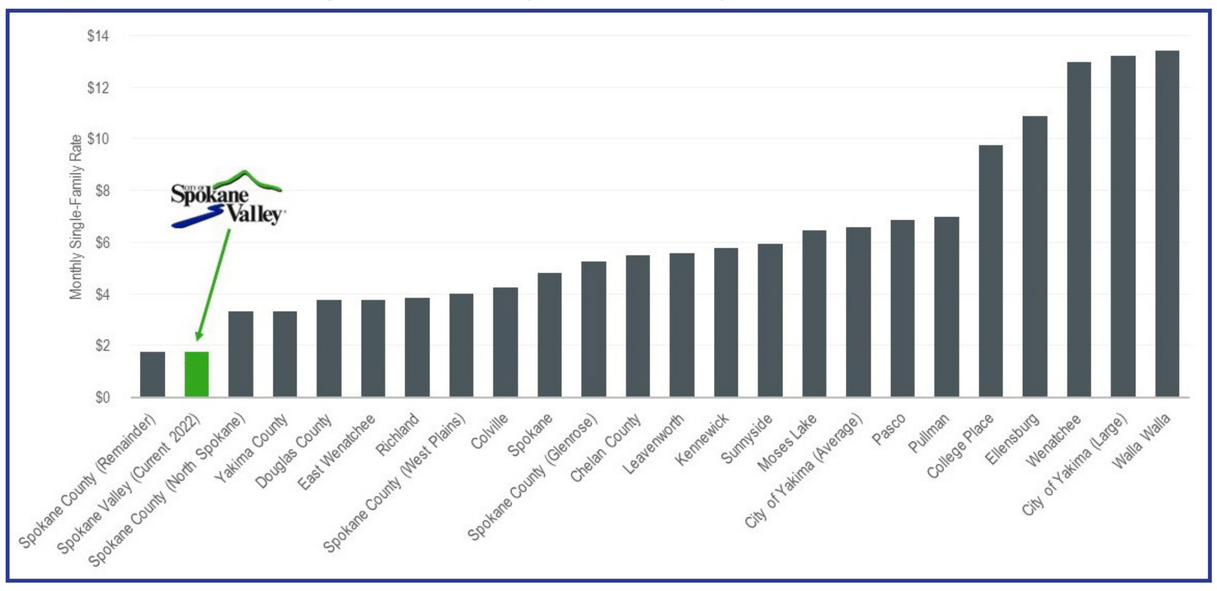
What does the Stormwater Utility do?

The City's Stormwater Utility is responsible for owning, operating, and maintaining the City's stormwater assets (drains, pipes, treatment facilities, etc.), which treat and convey stormwater runoff. In addition, they are responsible for meeting requirements and standards mandated by local, state, and federal regulations for managing stormwater.

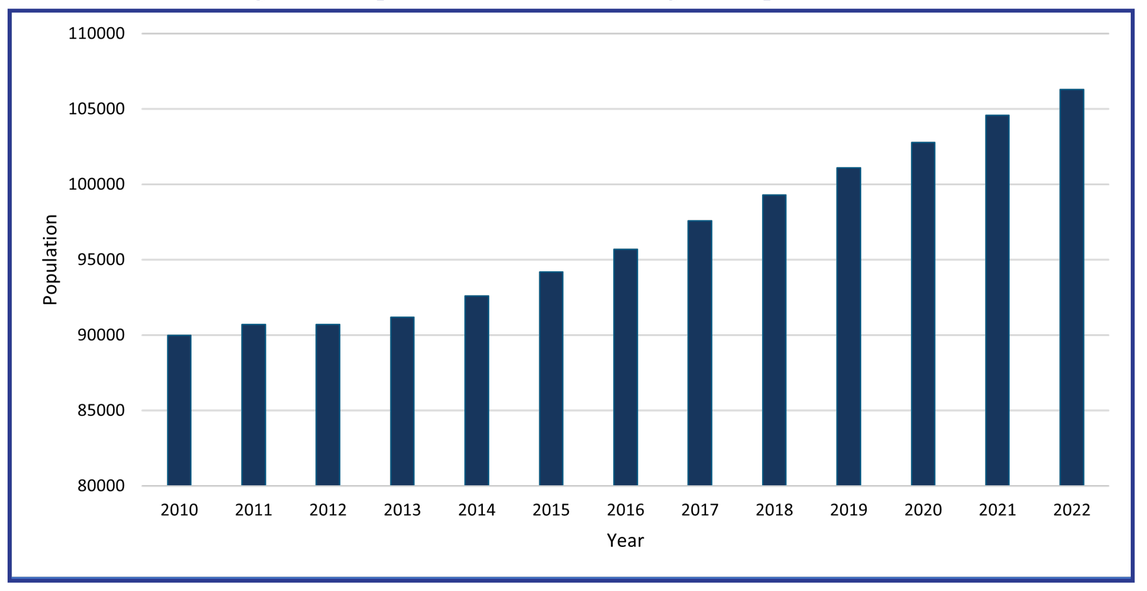
Why is the Fee Increasing?

- Rapid Population Growth
- Increased State and Federal Regulatory Requirements
- Cost Inflation

Current Single-Family Monthly Stormwater Rates



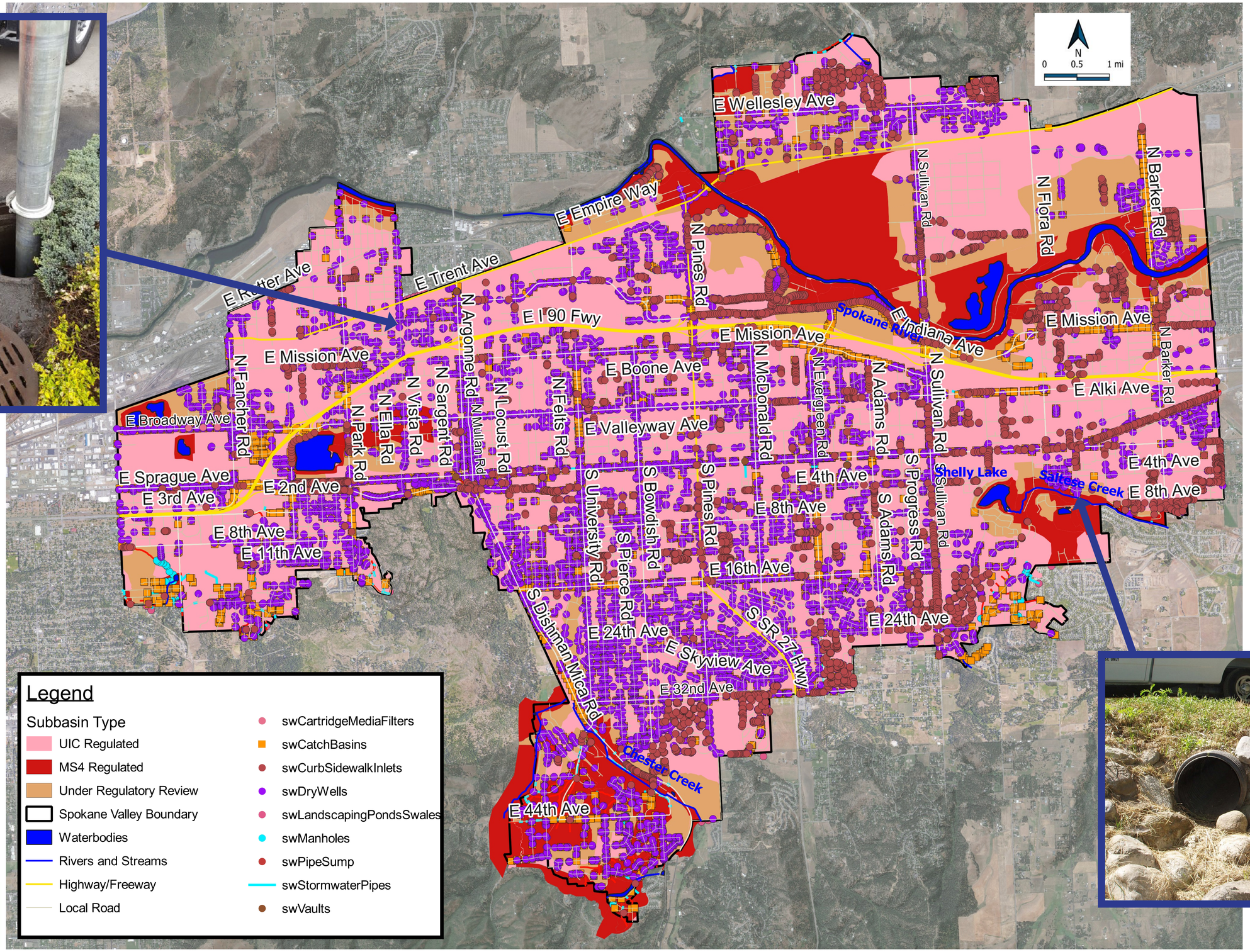
City of Spokane Valley Population



Since 2006, the City has experienced a significant increase in population and urban density. The City's existing Stormwater Utility Fee no longer allows it to provide the desired level of service to citizens.

CITY OF Spokane Valley®

Stormwater Assets



Legend

Subbasin Type

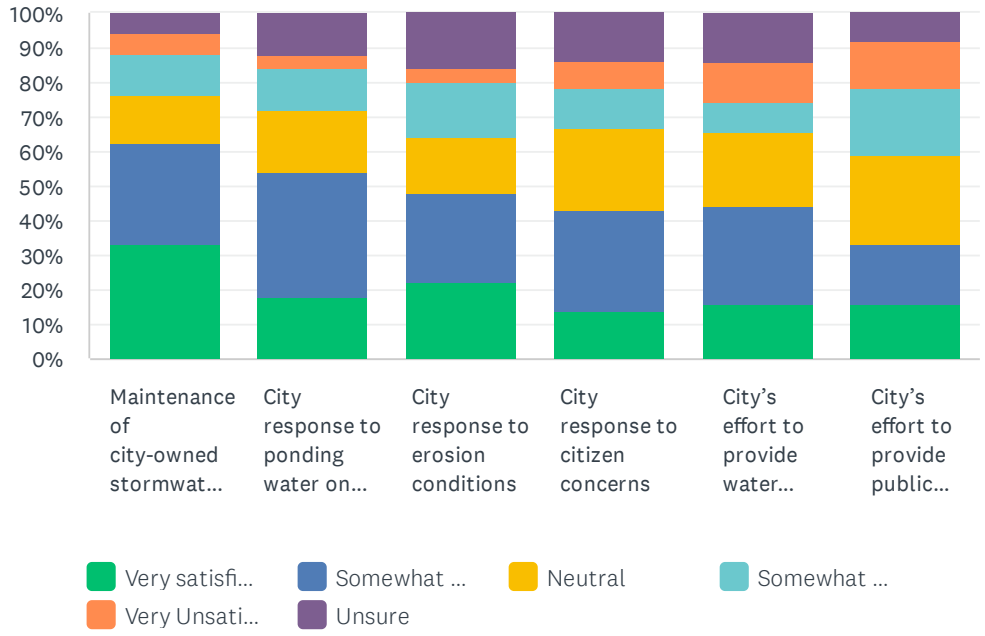
- UIC Regulated
- MS4 Regulated
- Under Regulatory Review
- Spokane Valley Boundary
- Waterbodies
- Rivers and Streams
- Highway/Freeway
- Local Road

- swCartridgeMediaFilters
- swCatchBasins
- swCurbSidewalkInlets
- swDryWells
- swLandscapingPondsSwales
- swManholes
- swPipeSump
- swStormwaterPipes
- swVaults

City of Spokane Valley

Q1 How satisfied are you with the current Level of Service (LOS) provided by the city's stormwater utility regarding the following:

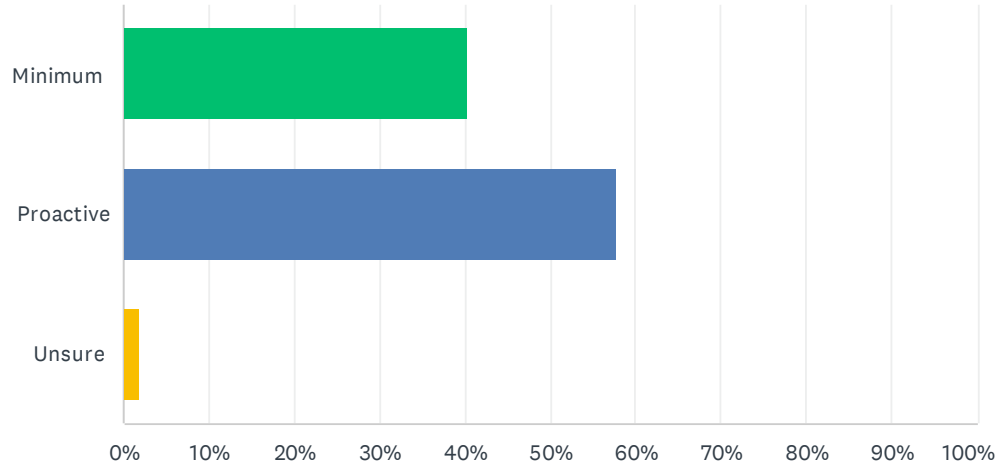
Answered: 51 Skipped: 1



	VERY SATISFIED	SOMEWHAT SATISFIED	NEUTRAL	SOMEWHAT UNSATISFIED	VERY UNSATISFIED	UNSURE	TOTAL
Maintenance of city-owned stormwater assets (culverts, ditches, infiltration facilities, etc.)	33.33% 17	29.41% 15	13.73% 7	11.76% 6	5.88% 3	5.88% 3	51
City response to ponding water on roadways and shoulders condition	18.00% 9	36.00% 18	18.00% 9	12.00% 6	4.00% 2	12.00% 6	50
City response to erosion conditions	22.00% 11	26.00% 13	16.00% 8	16.00% 8	4.00% 2	16.00% 8	50
City response to citizen concerns	13.73% 7	29.41% 15	23.53% 12	11.76% 6	7.84% 4	13.73% 7	51
City's effort to provide water quality improvement facilities	16.00% 8	28.00% 14	22.00% 11	8.00% 4	12.00% 6	14.00% 7	50
City's effort to provide public education and outreach	15.69% 8	17.65% 9	25.49% 13	19.61% 10	13.73% 7	7.84% 4	51

Q2 Do you prefer the city follow a minimum or proactive level of service to stormwater management?

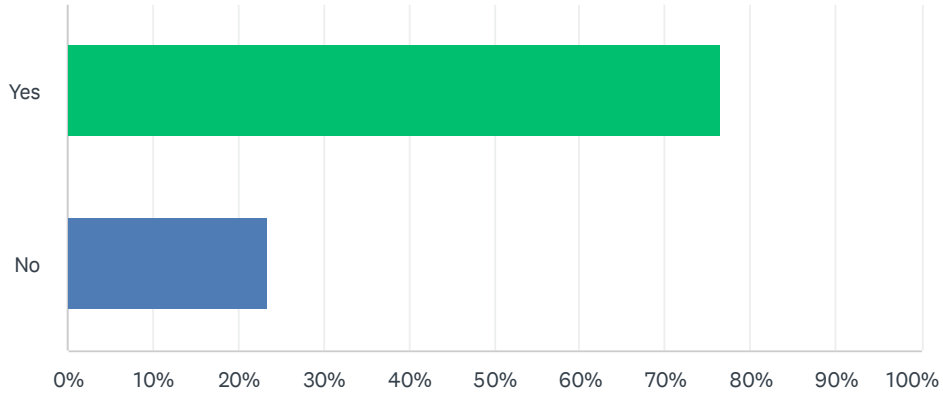
Answered: 52 Skipped: 0



ANSWER CHOICES	RESPONSES	
Minimum	40.38%	21
Proactive	57.69%	30
Unsure	1.92%	1
Total Respondents: 52		

Q3 Are you aware that all residential property owners pay a $1.75 per month stormwater utility fee (the fee for commercial and industrial is prorated) to the city along with their property taxes?

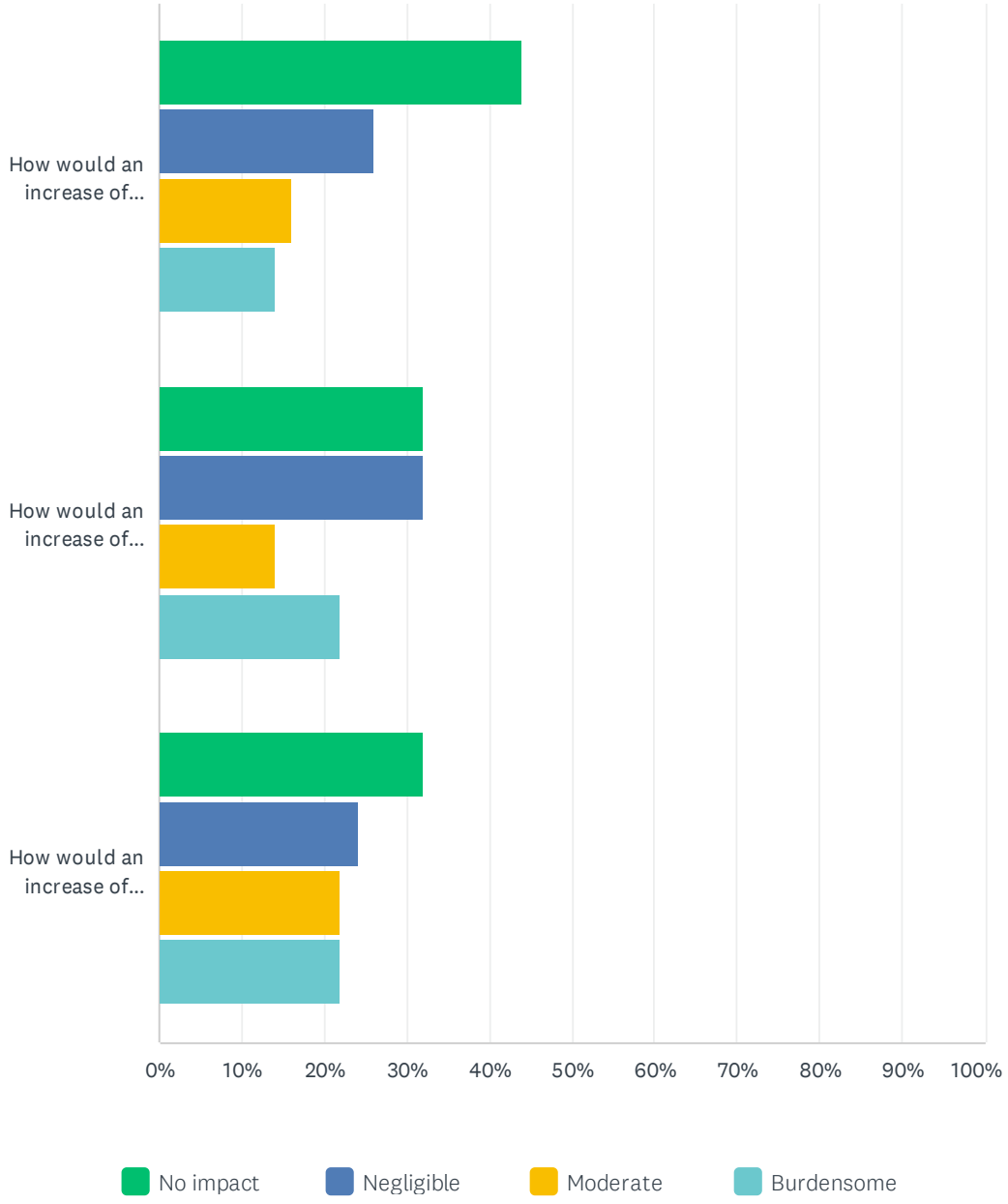
Answered: 51 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	76.47%	39
No	23.53%	12
Total Respondents: 51		

Q4 How would the following rate increases impact you?

Answered: 50 Skipped: 2



	NO IMPACT	NEGLIGIBLE	MODERATE	BURDENSOME	TOTAL
How would an increase of $1.50 - $2.50 per month impact you?	44.00% 22	26.00% 13	16.00% 8	14.00% 7	50
How would an increase of $2.51 - $3.00 per month impact you?	32.00% 16	32.00% 16	14.00% 7	22.00% 11	50
How would an increase of $3.01 - $3.50 per month impact you?	32.00% 16	24.00% 12	22.00% 11	22.00% 11	50

Q5 What other feedback would you like the City Council to consider prior to adopting the stormwater utility fee increase?

Answered: 28 Skipped: 24

#	RESPONSES	DATE
1	I love that Spokane Valley is so conscientious about keeping taxes and fees low, but we need to balance keeping costs low with providing services that will keep our drinking water clean for the next generation. I fully support a reasonable fee increase in order to be more proactive in treating water before it reaches our aquifer.	10/24/2022 6:41 AM
2	Comprehensive and maximum effective protection of aquifer with minimum disruption of property interests and downgrading of vehicular traffic flow/service levels over time.	10/22/2022 9:55 AM
3	regarding swales: I am more familiar with the City of Spokane swales having watched them being constructed with very particular soils and amendments to filter and neutralize run off. Will this be the same type used in the valley. I also note that city swales also have water to sustain growth of appropriate grasses and trees planted in the swales will this also be provided in the valley design. Also i have seen residents in the city all landscaping to swales in theior front yard and maintain keeping the debris or trash out of the swales would you consider homeowners taking on that responsibility and posssibly reducing the fee for them and do you anticipate a reduction for Seniors or others on a fixed income.	10/21/2022 1:06 PM
4	It's very disappointing to see the lack of effort put into this 'outreach.' No case study examples, potential projects, specific problems to be addressed, or opportunities for improvement were cited. Instead, we are asked simply: "Do ya wanna pay some, or do ya wanna pay more?" The answer is predetermined of course... Who would chose to pay more without understanding what they are paying more for??? No one, of course. This isn't public participation, it's the illusion of public participation. The decision has already been made to do the bare minimum, when the choice was made to do the bare minimum in this survey. If the creators of this survey had any interest in any robust feedback, they would have given robust information and examples of the different choices. This has not been done. Garbage in, garbage out. No one in their right mind who doesn't have outside knowledge of stormwater and urban planning is going to vote for "more" because the pros and cons haven't been discussed and no concrete examples of what "more" looks like have been given. Why even bother to conduct this survey? What's the point? Looks like a waste of staff time. So... Just do the bare minimum, like the city always does (is our shiny new city hall still sinking? Who knew fill needed to be *compacted*?!) and be done with it.	10/20/2022 2:20 PM
5	If the city is growing, wouldn’t the fees from the new growth cover the needed increase? Why not charge more for new growth?	10/20/2022 10:20 AM
6	Please continue planning for the future, not just now! Thank you!!!	10/20/2022 9:46 AM
7	We should always be prioritizing long-term benefits when choosing our actions with respect to water/aquifer quality. Damage to the system can be extremely difficult to repair.	10/20/2022 9:35 AM
8	Protecting water quality is so important. Also more education on protecting and conserving water.	10/20/2022 7:30 AM
9	It is less expensive to be proactive than it is to fix things once they are broken. This is an important job that needs to be done right. Please protect our city.	10/20/2022 7:24 AM
10	I support replacing aging infrastructure and water quality improvement projects	10/20/2022 7:04 AM
11	How dare you act like treating stormwater is a CHOICE. What is wrong with you? Water is our most valuable resource, and all citizens have a right to it. Treat it as such.	10/20/2022 6:24 AM
12	First of all, the increase in taxes is small, but that doesn't change the fact that the wealthy land owners are not paying their fair share. In reality, the tax should go down for single family dwellings and up for big businesses and apartment complexes. The injustice of tax breaks for	10/16/2022 8:05 AM

	corporations and apartment is obvious. Don't get me started on the injustice of property taxes. Thank you for giving me the opportunity to vent.	
13	Poor planning on your part, e.g., giving numerous tax breaks for apartments etc, should not mean higher taxes for those of us who own our own home. We didn't do anything to increase the need for stormwater maintenance and we pay our fee monthly, on time. Tax those who are "taxing" the system.	10/16/2022 7:58 AM
14	Will this be a vote of the people?	10/16/2022 12:36 AM
15	Improve infrastructure to meet future growth. In other words, if installing or updating a pipe, size it for potential growth that might feed into it.	10/13/2022 10:44 AM
16	elevate the buildup of traffic along pines, especially by pines and mission ave. add more lanes for traffic flow, and synchronize the lights beginning at pines and mission through to Montgomery.	10/13/2022 9:29 AM
17	Please take a long term approach to maintaining and improving essential public infrastructure. Failure to keep up with maintenance will cause much more expensive problems in the future. I feel this way about many Valley assets including parks, storm water, roads. Bring the cheapest city degrades the ability to maintain public assets and puts the burden on future residents.	10/13/2022 5:50 AM
18	Your feedback request indicates the rates are going to be increased regardless of this survey. Therefore this survey is just for show.	10/12/2022 6:06 PM
19	Be sure all expenditures are really needed.	10/12/2022 2:35 PM
20	Health of the aquifer is essential. I know a bit more about what we need to do to help by going on field trips with students. This information needs to be better shared with the general population. That means supporting whatever fee increase that is necessary to achieve this.	10/12/2022 2:26 PM
21	Our area has great filtration with swells that city has no cost to maintain. Where does all the $ go from all the increase in building that has made great increase in the fees or tax on us that do not need your help. All the new buildings has had plenty of $ to fill your needs with out taxing us that have paid for ours already.	10/12/2022 11:32 AM
22	Will surely cause a space rent increase at mobile home park I am in.	10/12/2022 11:28 AM
23	It doesn't help in your notification of this incident that you say there is a "minimum" or "pro-active" way to do things, but they both reference doing the exact same thing. And then there is no information on what actual fees are being charged for the "pro-active." Hard to make a decision if you have no idea how much you're going to get "dinged" again. And put Sprague back to the way it was; we already paid to have the road widened, so leave it that way.	10/12/2022 10:57 AM
24	Being a widow on social security leaves NO room for additional fees.	10/12/2022 10:17 AM
25	We happen to be located in a great free draining geological area and sense the Spokane County Storm water manual era these issues have greatly increased. Please do not dismiss or misunderstand we don't want to pollute the river and aquifer, but many feel like issues with storm water are self-inflected, from fear of the Washington state Ecology Agency. Adding more cost to a program that is showing signs of failure should be a stopping point, and reevaluating our path forward, instead of fearing Washington State Ecology dropping the hammer on us, let's look at more options outside the front and back cover of a broken manual, instead of adding more cost to our tax base.	10/12/2022 10:12 AM
26	When winter ground frozen, runoff from Boone Av and roof puddles on gravel driveway for several days, up to 2 inches. Then muddy for weeks after ground thaws enough for water to soak in. Thinking of burying barrel to collect water from roof and pipe overflow to old leach field. Already have dug dip in driveway to divert water before it reaches house.	10/12/2022 10:11 AM
27	I'm all for proactive maintenance. For example, I greatly appreciate the proactive road maintenance Spokane Valley does. However as a senior citizen, I'm concerned about our property taxes. They've gone up a lot in the past few years, to the point that it's a burden. So I'm not inclined to vote for anything that increases them even more. It seems a portion of the increase that's already occurred might be directed toward storm water issues. Where are all the extra property taxes going?	10/12/2022 10:09 AM
28	Review/audit the City contract with AAA Sweeping. My residential street is swept at numerous times each summer-even when no debris has accumulated. Savings from reducing unneeded	10/12/2022 9:58 AM

	sweeping could be allocated to the stormwater program.	

APPENDIX B

SEPA Checklist and Public Comment

10210 E Sprague Avenue ♦ Spokane Valley WA 99206
Phone: (509) 720-5240 ♦ Fax: (509) 720-5075 ♦ permitcenter@spokanevalley.org

SEPA CHECKLIST
SVMC 21.20

STAFF USE ONLY

Date Submitted:_____ **Received by:**_____ **Fee:**_____

PLUS #:_____ **File #:**_____

PART I – REQUIRED MATERIAL

****THE APPLICATION WILL NOT BE ACCEPTED IF THE REQUIRED MATERIALS ARE NOT PROVIDED****

- ☐ **Completed SEPA Checklist**
- ☐ **Application Fee**
- ☐ **Reduced Site Plan of proposal in 8½" by 11" or 11" by 17" size**
- ☐ **Trip Distribution and Generation Letter, if requested by Development Engineering.**

PURPOSE OF CHECKLIST:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

INSTRUCTIONS FOR APPLICANTS:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

USE OF CHECKLIST FOR NON-PROJECT PROPOSALS:

Complete this checklist for non-project proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS (Part D).

For non-project actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:
   City of Spokane Valley Stormwater Comprehensive Stormwater Plan

2. Name of applicant:
   City of Spokane Valley

3. Address and phone number of applicant and contact person:
   Ms. Lori Barlow, AICP | Senior Planner
   10210 E Sprague Avenue | Spokane Valley, WA 99206
   (509) 720-5335 | lbarlow@spokanevalley.org

4. Date checklist prepared:
   August 29, 2022

5. Agency requesting checklist:
   City of Spokane Valley

6. Proposed timing or schedule (including phasing, if applicable):
   The adopted City of Spokane Valley Stormwater Comprehensive Plan will be released in Q4 of 2022.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
   None

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
   None

10. List any government approvals or permits that will be needed for your proposal, if known.
    City of Spokane Valley Council Approval

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
    The goal of this project is to develop a stormwater comprehensive plan, rate study, and proposed rate

revision plan for the City of Spokane Valley (City). The City owns, operates, and maintains a Stormwater Utility which includes infrastructure governed by the Municipal Separate Storm Sewer System (MS4) Permit as well as the Underground Injection Control (UIC) Program (UIC Rule) governed by Washington Administrative Code (WAC 173-218). The stormwater comprehensive plan developed as part of this project will address new and increased requirements of the MS4 Permit and UIC Rule Guidance, updated projections of future customer and infrastructure growth and development, and adjustment of stormwater rates and rate structure to maintain sustainable funding of the City's Stormwater Utility.

The City of Spokane Valley stormwater utility has been in place since the City's incorporation in 2003. The impervious-based rate of $21 per year is imposed uniformly on single family residences, duplexes, triplexes, and fourplexes. All other developed property is charged $21 for every 3,160 square feet of measured impervious surface area – the average amount of impervious surface area on single family residences in Spokane Valley. The stormwater rate is expected to generate about $1.9 million in 2022 to fund 402.

The stormwater program also receives funding from the Spokane County Aquifer Protection Area fee, imposed on each water meter by meter size. Funds from this source must be "expended entirely on stormwater related projects that are designed to protect the aquifer." This fee will sunset in November of 2024 without a regional public vote. This fee is expected to generate over $450,000 in 2022 to fund 403.

The task plan for this project would provide a multi-year revenue requirement (financial plan), a cost-of-service analysis, and rate structure options, with supporting outreach and documentation. The goal is to have this rate study and the proposed rate revisions completed in time to present it at required public hearing meetings and obtain City Council approval in November 2022 for Council adoption and implementation for 2023.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.
    Changes to the City of Spokane Valley Stormwater Comprehensive Plan will apply citywide in the City of Spokane Valley city limits.

13. Does the proposed action lie within the Aquifer Sensitive Area (ASA)? (See: Spokane County's ASA Overlay zone Atlas for boundaries).
    The majority of the City of Spokane Valley is developed over an Aquifer Protection Area, as per the Spokane County ASA Overlay).
    The general Sewer Service Area? Priority Sewer Service Area?
    The proposed plan applies to all Sewer Service Areas within city limits.

14. The following questions supplement Part A:
    a. Critical Aquifer Recharge Area (CARA) / Aquifer Sensitive Area (ASA).
        1. Describe any systems, other than those designed for the disposal of sanitary waste, installed for the purpose of discharging fluids below the ground surface (includes systems such as those for the disposal of stormwater or drainage from floor drains). Describe the type of system, the amount of materials to be disposed of through the system and the types of material likely to be

disposed of (including materials which may enter the system inadvertently through spills or as a result of firefighting activities).
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

2. Will any chemicals (especially organic solvents or petroleum fuels) be stored in aboveground or underground storage tanks? If so, what types and quantities of material will be stored?
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Spokane Valley Municipal Code (SVMC) Section 21.40.062 details the requirement for secondary containment of chemicals stored at critical areas.

3. What protective measures will be taken to insure that leaks or spills of any chemicals stored or used on site will not be allowed to percolate to groundwater? This includes measures to keep chemicals out of disposal systems.
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Spokane Valley Municipal Code (SVMC) Section 21.40.062 details the requirement for secondary containment of chemicals stored at critical areas. SMVC Section 21.40.063 details requirements for a spill containment management plan to be submitted with a critical area report in critical aquifer recharge areas. All construction is required to develop and follow a Stormwater Pollution Prevention Plan (SWPPP) as mandated by the US Environmental Protection Agency.

4. Will any chemicals be stored, handled or used on the site in a location where a spill or leak will drain to surface or groundwater or to a stormwater disposal system discharging to surface or groundwater?
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Spokane Valley Municipal Code (SVMC) Section 21.40.062 details the requirement for secondary containment of chemicals stored at critical areas. SMVC Section 21.40.063 details requirements for a spill containment management plan to be submitted with a critical area report in critical aquifer recharge areas. All construction is required to develop and follow a SWPPP as mandated by the US Environmental Protection Agency.

b. Stormwater

1. What are the depths on the site to groundwater and to bedrock (if known)?
N/A. Non-project action.

2. Will stormwater be discharged into the ground? If so, describe any potential impacts.
N/A. Non-project action. The City of Spokane Valley Stormwater Comprehensive Plan will provide overall management strategies of stormwater including stormwater discharged into the ground compliant with local, state, and federal requirements. Project specific impacts will be assessed during individual project application and permitting review processes.

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B. Environmental Elements

1. Earth

a. General description of the site (circle one): flat, rolling, hilly, steep slopes, mountainous, other
N/A. Non-project action. As per ESRI generated aerials and City GIS (2022), the City of Spokane Valley consists of primarily flat land with some hills and steep slopes.

b. What is the steepest slope on the site (approximate percent slope)?
N/A. Non-project action. As per City GIS (2022), there are mapped areas with 30% or greater slopes within city limits.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, much)?
If you know the classification of agricultural souls, specify them and note any prime farmland.
N/A. Non-project action. As per the US Department of Agriculture's (USGA) Web Soils Survey mapping tool (2022), loams including silt loams, sandy loams, and gravelly ashy loams are primarily found within city limits where urban land has not been developed. Some areas of sand are also present. The dominating soil types outside of urbanized areas include the following map unit names in sequential order: Opportunity very gravelly ashy loam, 0 to 3 percent slopes; Lenz-Rock outcrop complex, 15 to 30 percent slopes; and Kramerhill-Spokane complex, 8 to 25 percent slopes. There are no agricultural areas zoned within city limits, therefore there is no prime farmland (2022).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
N/A. Non-project action. As per City GIS (2022), historical landslide deposits can be found within city limits near areas of steep slope greater than 30%.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Also indicate source of fill.
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
N/A. Non-project action. The City regulates the construction of any project proposing to place 5,000-square feet or more of impervious surfaces to any one site as per SVMC Section 22.150.020.

h. Proposed measures to reduce or control erosion or other impacts to the earth, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Erosion and sediment impacts are regulated by project SWPPPs, construction BMPs addressed in the Washington State Department of Ecology's (Ecology) Construction Stormwater General Permit, and construction BMPs and programs addressed in Ecology's Eastern Washington Phase II Municipal Stormwater Permit. All shoreline modification activities for shoreline and slope stabilization projects are regulated under SVMC Section 21.50.420. Construction activities must provide the City with a

Temporary Erosion and Sediment Control plan (TESC) at time of grading permit application, as directed by SVMC Chapter 24.50.

2. Air
   a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
   This is a non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

   The study will recommend an increased level of staffing and operation and maintenance activities to keep pace with the growing population and infrastructure, resulting in a minimal amount of additional automobile and equipment emissions.

   b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
   N/A. Non-project action.

   c. Proposed measures to reduce or control emissions or other impacts to air, if any:
   N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

3. Water
   a. Surface:
      1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
      N/A. Non-project action. There are areas of open water in city limits including the Spokane River, Shelley Lake, Chester Creek, Saltese Creek, and connecting tributaries.

      2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
      N/A. Non-project action. All future project construction along the Spokane River and Shelley Lake will be subject to the City's Shoreline Master Program jurisdiction.

      3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected and the source of fill material.
      N/A. Non-project action.

      4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
      N/A. Non-project action. All future project specific surface water withdrawal or diversion impacts will be subject to State Environmental Policy Act (SEPA) and Hydraulics Permit Approval (HPA) authorities.

5. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
N/A. Non-project action. As per the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (2022), land surrounding the Spokane River and Shelley Lake are subject to being within the 100-year floodplain. Floodplain regulations are addressed in SVMC Chapter 21.30.

6. Does the proposal involve any discharges of waste materials to surface waters?
If so, describe the type of waste and anticipated volume of discharge.
N/A. Non-project action. Any future project activities as result of this plan will be subject to the National Pollution Detection and Elimination System's permit which monitors all activities involving discharge of materials into surface waters and is regulated at both state and federal levels.

b. Ground:

1. Will ground water be withdrawn, or will water be discharged to ground water?
Give general description, purpose, and approximate quantities known.
N/A. Non-project action. All future project specific groundwater withdrawal or discharge impacts will be subject to State Environmental Policy Act (SEPA) and Hydraulics Permit Approval (HPA) authorities.

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.).
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

3. Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
N/A. Non-project action. The City of Spokane Valley serves 102,976 residents (as per the 2020 Census), and spans 38.01 square miles.

c. Water runoff (including stormwater):

1. Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). N/A. Non-project action.
Where will this water flow? N/A. Non-project action.
Will this water flow into other waters? If so, describe.
N/A. Non-project action. All stormwater in the City of Spokane Valley will flow into the Spokane River, which will flow west connecting with the Columbia River, continuing west until it reaches the Pacific Ocean.

2. Could waste materials enter ground or surface waters? If so, generally describe.
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Any future project activities as result of this plan will be subject to the National Pollution Detection and Elimination System's permit which monitors all activities

involving discharge of materials into surface and ground waters and is regulated at both state and federal levels.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

4. Plants

a. Circle types of vegetation found on the site:
   1. Deciduous tree: alder, maple, aspen, other
   2. Evergreen tree: fir, cedar, pine, other
   3. Shrubs
   4. Grass
   5. Pasture
   6. Crop or grain
   7. Wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
   8. Water plants: water lily, eelgrass, milfoil, other
   9. Other types of vegetation

b. What kind and amount of vegetation will be removed or altered?
N/A. Non-project action.

c. List threatened or endangered species known to be on or near the site.
N/A. Non-project action. *Silene spaldingii* (Spalding's catchfly) may occur within city limits as per the USFWS Information for Planning and Consultation mapper (2022).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
N/A. Non-project action.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:
   1. Birds: hawk, heron, eagle, songbirds, other
   2. Mammals: deer, bear, elk, beaver, other
   3. Fish: bass, salmon, trout, herring, shellfish, other

b. List any threatened or endangered species known to be on or near the site.
N/A. Non-project action. The following list includes all listed species recorded to have been observed within city limits as per the Washington State Department of Fish and Wildlife (WDFW) Priority Habitat and Species mapper (2022) and the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation mapper (2022):
   - *Alces alces* (Moose)
   - *Anodonta californiensis* (California floater)
   - *Cervus elaphus nelson* (Rocky Mountain elk)

- *Coccyzus americanus* (Yellow-billed cuckoo)
- *Danaus plexippus* (Monarch butterfly)
- *Fisherola nuttalli* (Shortface lanx)
- *Odocoileus virginianus ochrourus* (Northwest white-tailed deer)
- *Oncorhynchus clarki lewisi* (Westslope cutthroat)
- *Oncorhynchus mykiss* (Rainbow trout)
- *Oreortyx pictus* (Mountain quail)
- *Salvelinus confluentus* (Bull trout)

c. Is the site part off a migration route? If so, explain.
N/A. Non-project action.

d. Proposed measures to preserve or enhance wildlife, if any:
N/A. Non-project action. Projects proposed by the plan may inadvertently positively impact quality of preservation or enhancement efforts of wildlife and wildlife habitat.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
N/A. Non-project action.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
N/A. Non-project action. The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to affect the potential use of solar energy by any properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other measures to reduce or control energy impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.
N/A. Non-project action.

1. Describe special emergency services that might be required.
N/A. Non-project action.

2. Proposed measures to reduce or control environmental health hazards, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
   N/A. Non-project action.

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
   N/A. Non-project action.

3. Proposed measures to reduce or control noise impacts, if any:
   N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Level of noise is regulated by SMVC Section 7.05.040.

8. Land and shoreline use

   a. What is the current use of the site and adjacent properties?
      N/A. Non-project action.

   b. Has the site been used for agriculture? If so, describe.
      N/A. Non-project action. No areas within city limits are zoned for agriculture.

   c. Describe any structures on the site.
      N/A. Non-project action.

   d. Will any structures be demolished? If so, what?
      N/A. Non-project action.

   e. What is the current zoning classification of the site?
      N/A. Non-project action. Currently, the city has areas zoned for single family residential; industrial; corridor mixed use; multifamily residential; regional commercial; parks, recreation, and open space; mixed use; industrial mixed use; and neighborhood commercial (in sequential order of percent coverage).

   f. What is the current comprehensive plan designation of the site?
      N/A. Non-project action.

   g. If applicable, what is the current shoreline master program designation of the site?
      N/A. Non-project action.

   h. Has any part of the site been classified as an “environmentally sensitive” area?
      If so, specify.
      N/A. Non-project action.

   i. Approximately how many people would reside or work in the completed project?
      N/A. Non-project action.

j. Approximately how many people would the completed project displace?
N/A. Non-project action.

k. Proposed measures to avoid or reduce displacement impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans. If any:
N/A. Non-project action.

9. Housing

a. Approximately how many units would be provide, if any? Indicate whether high, middle, or low-income housing.
N/A. Non-project action.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
N/A. Non-project action.

c. Proposed measures to reduce or control housing impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual application and permitting review processes.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?
N/A. Non-project action.

b. What views in the immediate vicinity would be altered or obstructed?
N/A. Non-project action.

c. Proposed measures to reduce or control aesthetic impacts, if any:
N/A. Non-project action.

11. Light and glare

a. What type of light or glare will the proposal produce? N/A. Non-project action.
What time of day would it mainly occur? N/A. Non-project action.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
N/A. Non-project action.

c. What existing off-site sources of light or glare may affect your proposal?
N/A. Non-project action.

d. Proposed measures to reduce or control light and glare impacts, if any:
N/A. Non-project action.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
N/A. Non-project action. The City of Spokane Valley hosts twelve parks and three pools for recreational use (2022). Parks, Recreation, and Open Space account for three-percent of the city's total area. View the City of Spokane Valley Parks and Recreation Master Plan 2019 Update for further details.

b. Would the proposed project displace any existing recreational uses? If so, describe.
N/A. Non-project action. The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to displace any existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual application and permitting review processes.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
N/A. Non-project action. The Spokane Historic Preservation Office has recorded three listed historic properties within Spokane Valley city limits including the Rosebush House (National Register), Opportunity Township Hall (Spokane Register), and Farr Barn (Heritage Barn Register) (2022).

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
N/A. Non-project action.

c. Proposed measures to reduce or control impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual project application and permitting review processes. Activities occurring near areas of archeological and historic significance are regulated in SMVC 21.50.280. If these resources are found on site during any future project proposed by the plan, local (Spokane County) and state (Washington State Department of Archaeology and Historic Preservation (DAHP)) agencies will need to be immediately involved in the protection and preservation of these resources.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
N/A. Non-project action.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

N/A. Non-project action. The City of Spokane Valley is served by Spokane Transit Authority which provides transportation via bus, city line, paratransit, vanpool, and park and rides.

c. How many parking spaces would the completed project have? N/A. Non-project action.
How many would the project eliminate? N/A. Non-project action.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
N/A. Non-project action.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
N/A. Non-project action.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
N/A. Non-project action.

g. Proposed measures to reduce or control transportation impacts, if any:
N/A. Non-project action. Project specific impacts will be assessed during individual application and permitting review processes.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
N/A. Non-project action. The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to result in an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.
N/A. Non-project action. Project specific impacts will be assessed during individual application and permitting review processes.

16. Utilities

a. Circle utilities currently available at the site:
   1. Electricity
   2. Natural gas
   3. Water
   4. Refuse service
   5. Telephone
   6. Sanitary sewer
   7. Septic system
   8. Other-describe

N/A. Non-project action.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
N/A. Non-project action.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____ Date: 8/29/2022 Submitted: 8/29/2022

D. Supplemental Sheet for Non-Project Actions

(Do not use this sheet for project actions) Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment. When answering these questions, be aware of the extent of the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?
The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise. The overall strategy and management approach of this plan mandates the City to be compliant with all local, state, and federal stormwater requirements and ensure that there is no backsliding (i.e., all lawful regulations will be upheld at minimum).

a. Proposed measures to avoid or reduce such increases are:
Project specific impacts will be assessed during individual project application and permitting review processes.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?
The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to negatively affect plants, animals, fish, or marine life. There is potential that the improved management of the stormwater will improve water quality and habitat, positively impacting plants, animals and fish.

a. Proposed measures to protect or conserve plants, animals, fish, or marine life are:
Projects proposed by the plan may indirectly positively impact quality of protections or conservation efforts associated with plants, animals and fish. Project specific impacts will be assessed during individual project application and permitting review processes.

3. How would the proposal be likely to deplete energy or natural resources?
The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to deplete energy or natural resources.

The study will likely recommend an increased level of staffing and operation and maintenance activities to keep pace with the growing population and stormwater infrastructure, resulting in a minimal amount of additional automobile and equipment emissions.

a. Proposed measures to protect or conserve energy and natural resources are:
The plan will protect the Spokane Valley-Rathdrum Prairie aquifer through systematic project planning and water quality strategies. Specific projects proposed by the plan may increase protection and conservation efforts associated with natural resources. Project specific impacts will be assessed during individual project application and permitting review processes.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?
The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection. The plan identifies goals and policies to provide increased stormwater resources, protections, and management related to future development in the City.

a. Proposed measures to protect such resources or to avoid or reduce impacts are:
Recommendations proposed by the plan may inadvertently positively impact quality of protections associated with these resources. Any Project specific impacts will be assessed during individual project application and permitting review processes.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?
The City of Spokane Valley Stormwater Comprehensive Plan would be unlikely to affect land and shoreline use.

a. Proposed measures to avoid or reduce shoreline and land use impacts are:
Project specific impacts will be assessed during individual project application and permitting review processes. All future project construction along the Spokane River and Shelley Lake will be subject to the City's Shoreline Master Program jurisdiction.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?
The City of Spokane Valley Stormwater Comprehensive Plan will recommend a higher level of service for the stormwater utility and seeks to fund this via rate increases. This will help support the additional demands on the stormwater utility driven by population growth.

a. Proposed measures to reduce or respond to such demand(s) are:
Increasing stormwater rates to allow for sufficient funding of staff time and required programs associated with population growth.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The City of Spokane Valley Stormwater Comprehensive Plan will not conflict with local, state, or federal laws or requirements for the protection of the environment.

10210 E Sprague Avenue ♦ Spokane Valley WA 99206
Phone: (509) 720-5240 ♦ Fax: (509) 720-5075 ♦ permitcenter@spokanevalley.org

E. Signature

I, the undersigned, swear under penalty of perjury that the above responses are made truthfully and to the best of my knowledge. I also understand that, should there be any willful misrepresentation or willful lack of full disclosure on my part, the agency may withdraw any Determination of Nonsignificance that it might issue in reliance upon this check list.

Date: _____ Signature: _____

Please print or type:

Proponent: City of Spokane Valley Stormwater Utility

Address: 10210 E Sprague Avenue | Spokane Valley, WA 99206

Phone: 509-720-5000

Person completing form (if different from proponent):

Name: Osborn Consulting, Inc.

Address: 101 S Stevens Street | Spokane, WA 99201

Phone: (509) 867-3654

DISCLAIMER: By accepting this permit and proceeding with the work, the applicant/permittee and owner acknowledges and agrees that: 1) If this permit is for construction of or on a dwelling, the dwelling is/will be served by potable water. 2) Ownership of this City of Spokane Valley permit inures to the property owner. 3) The applicant/permittee is the property owner or has full permission and authority to represent the property owner in this project and carry out the work specified in the permit. 4) All construction is to be done in full compliance with the City of Spokane Valley Municipal Code. The applicable codes are available for review at the City of Spokane Valley Permit Center. 5) The applicant/permittee further declares that they are either: (A) a contractor currently registered and properly licensed in accordance with Chapter 18.27 RCW; (B) the registered or legal owner or authorized agent of the property for which I am applying for permit and not a licensed contractor; or (C) otherwise exempt from the requirements set forth in RCW 18.27.090 and will abide by all provisions and conditions of the exemption as stated. 6) The City of Spokane Valley permit is a permit to carry out the work as specified therein and is not a permit or approval for any violation of federal, state or local laws, codes or ordinances. 7) Compliance with all federal, state, and local laws shall be the sole responsibility of the applicant/permittee and property owner. 8) Plans or additional information may be required to be submitted and subsequently approved before this application can be processed. The City is not responsible for any code violation through the issuance of this permit. 9) Failure to request and obtain the necessary inspections and inspection approvals may necessitate stoppage of work and/or removal of certain parts of the construction at the applicant's/permittee's or property owner's expense.

SUPERIOR COURT *of* WASHINGTON *for* SPOKANE COUNTY

AFFIDAVIT *of* PUBLICATION

STORMWATER COMPREHENSIVE PLAN

NOTICE OF DETERMINATION OF NONSIGNIFICANCE SEP-2022-0011

STATE *of* OF WASHINGTON
County *of* Spokane

JENNETT MEYER being first duly sworn on oath deposes and says that she is the BOOKKEEPER of the Spokane Valley News Herald, a weekly newspaper. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continually as a weekly newspaper in Spokane County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper, which said newspaper had been approved as a legal newspaper by order of the Superior Court of the State of Washington in and for Spokane County. That the following is a true copy of a Legal Notice as it was published in regular issues commencing on the 30th day of September, 2022, and ending on the 30th day of September, 2022 and that such newspaper was regularly distributed to its subscribers during all of said period:

SUBSCRIBED and SWORN to before me
this 30th day of September, 2022.
State of Washington
County of Spokane

Title: Notary Public
My appointment expires 12/22/2025

VENUS M BRATSVEEN
Notary Public
State of Washington
License Number 168984
My Commission Expires
December 22, 2025

Notice of Determination of Non-Significance (DNS)
City of Spokane Valley

Date Issued: September 30, 2022

File Number & Name: SEP-2022-0011 – City of Spokane Valley Stormwater Comprehensive Plan

Proposal Description: Develop and adopt a stormwater comprehensive plan, rate study, and proposed rate revision plan for the City of Spokane Valley consistent with the MS4 Permit and UIC Rule Guidance governed by WAC 173-218, and other matters related.

Proposal Location:
The plan will affect properties city wide.

Owner: City of Spokane Valley, 10210 E Sprague Ave., Spokane Valley, WA 99206

Applicant: Chad Phillips, Project Engineer, City of Spokane Valley, same as above

Lead Agency: City of Spokane Valley

Determination: Pursuant to Title 21 (Environmental Controls) of the Spokane Valley Municipal Code (SVMC), the lead agency has determined that this proposal does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of the completed environmental checklist, the application, SVMC Titles 19, 21 and 22, site assessment, and comments from the public and affected agencies. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date issued. Comments must be received by 5:00 p.m. on October 14, 2022.

Staff Contact: Lori Barlow, ACIP, Senior Planner, City of Spokane Valley Permit Center, 10210 East Sprague Ave, Spokane Valley, WA 99206, PH (509) 720-5335 LBarlow@spokanevalley.org

Responsible Official:
Chaz Bates, AICP, Planning Manager

Appeal: An appeal of this determination shall be submitted to the Community & Public Works Department within fourteen (14) calendar days after the date issued. The appeal must be written, and specific factual objections made to the City's threshold determination. Appeals shall be conducted in conformance SVMC 17.90 Appeals, and any required fees pursuant to the City's adopted Fee Schedule shall be paid at the time of appeal submittal. Pursuant to WAC 197-11-680, appeals shall be limited to a review of a final threshold determination.

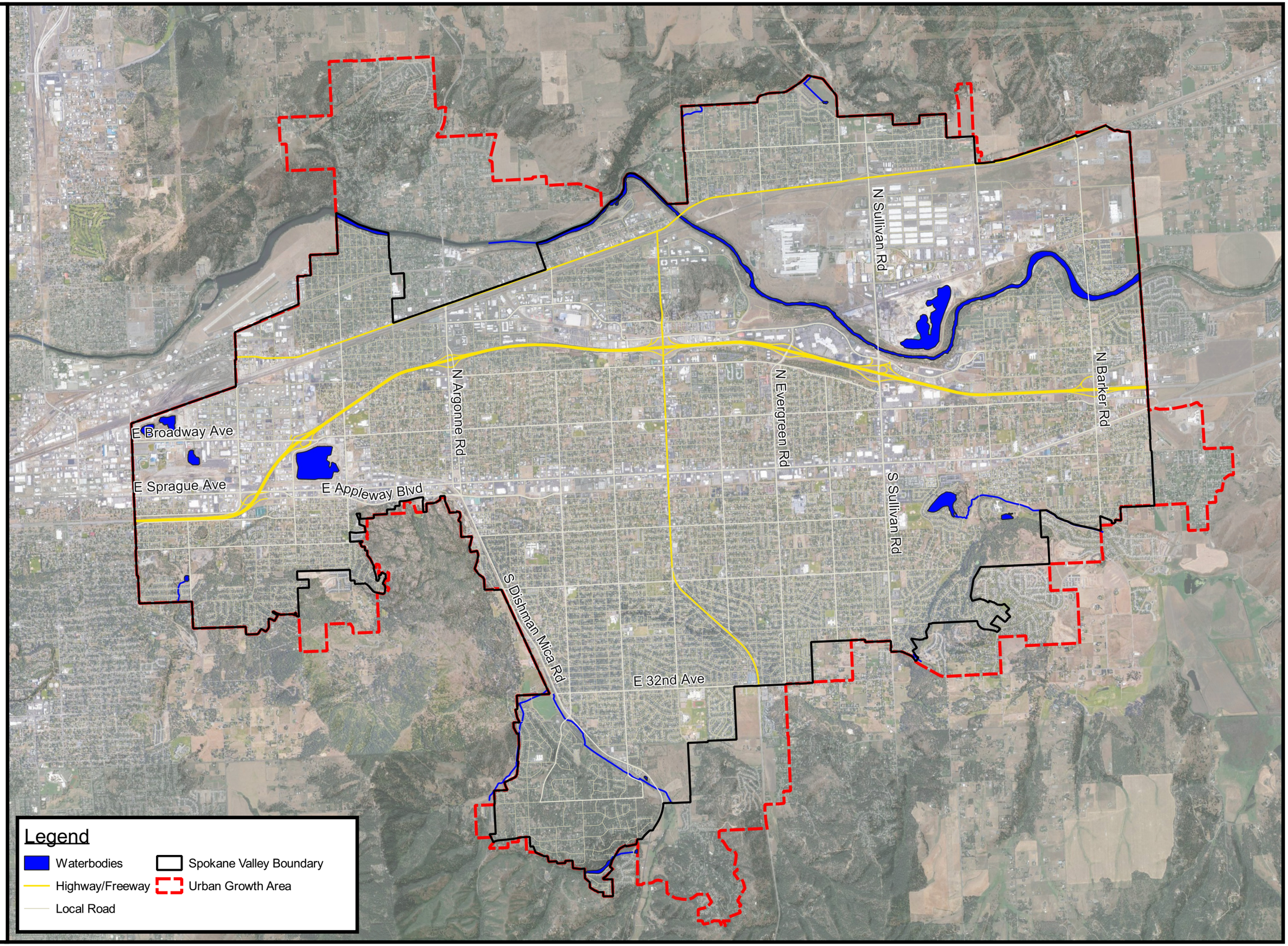
Carrie Koudelka, CMC
Spokane Valley Deputy City Clerk
PUBLISH: 9-30-22

APPENDIX C

Stormwater Utility Program Master Plan Supporting Map
Urban Growth Area Map

Urban Growth Area

Stormwater Utility Program
Master Plan



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CONSULTING
INCORPORATED

APPENDIX D

Level of Service Goals for Elements not Regulated by the MS4 Permit or UIC Rule

Category	General Description	Existing Activities	Minimum Required	Pro-Active
Maintenance Coordination and Support	Coordination and support with maintenance staff and activities which may include: communicating with maintenance regarding work identified through Q-Alert including repairs/replacement, IDDE clean-up, weed control, maintenance repair design, and support GPS tracking of city trucks.	• Presentation of sites (from Q-Alert primarily) to be constructed with maintenance monies. i.e. the 10% of maintenance street funds earmarked for stormwater. • Coordination with maintenance to mitigate non-construction Q-Alert complaints such as replacing stolen grates, broken structures, etc. • Coordination with maintenance regarding clean-up for illicit discharges, specifically spills • Coordination with maintenance regarding weed control and dryland grass facilities. Conduct system inspections using Geiger work crews (going away). Inspections are triggered by Q-Alert, maintenance staff identifying a problem. • Design work and plans for stormwater maintenance repairs • Support of GPS tracking of City trucks	same as existing activities	• Maintenance staff dedicated to conducting the required stormwater work that needs to be done • Have a process for identifying when the work will be completed (prioritization process) • Sufficient funds to complete all maintenance work that needs to be done each year.
Operation and Maintenance Management	Miscellaneous O&M drainage activities that are not coordinated with city maintenance.	• Chester Creek annual cleanup and vegetation management currently performed by Geiger Crew • O&M management – Summerfield overflow channel and swale, Carnahan West Apartments, etc. confirm private BMPs are working per the permit.	Same as existing except City will provide services currently provided by Geiger crews.	•City facilities - pervious asphalt/concrete, cartridges, etc. •Drain Water accounts (2)
Service Contract Support	Manage and plan for vendors with service contracts including street sweeping, storm drain cleaning, and landscape activities.	•Street Sweeping (managed by Shane in maintenance) ·contract development (once every 5 years) ·*develop mapping to direct sweeping program (covered in MS4)* ·data management from invoicing •Storm Drain Cleaning ·contract development (once every 5 years) ·*develop mapping to direct sweeping program (covered in MS4)* ·program inspection ·data management from invoicing ·data management from inspection notes •Roadway Landscaping Maintenance ·contract development (once every 5 years) ·Contract management ▫daily communication with contractor ▫citizen and staff complaints ▫landscape damage ▫system damage •Roadway Weed Control ·contract development (once every 5 years)	same as existing activities	•Street Sweeping ·GPS tracking ·evaluate current strategy for improvement ·adjust for regulatory area requirements -service contract inspector •Storm Drain Cleaning ·implement electronic reporting ·implement inspection strategy and duties ·evaluate current strategy for improvements ·adjust for regulatory area requirements •Roadway Landscaping Maintenance ·evaluate effectiveness of contract structure ·implement electronic reporting ·implement inspection strategy & duties into service ·dedicated in house staff for this work would be ideal - service contract inspector Roadway Weed Control -service contract inspector

Category	General Description	Existing Activities	Minimum Required	Pro-Active
Development Engineering Coordination and Support	Work by the development engineering staff to support stormwater aspects of private development. Occurs during permitting and inspections.	•Technical support regarding maintenance elements •Site visits, inspections, coordination during warranty sign off	Do nothing	•Identify funding for drainage aspects and pay for it out of SW fund. •Potential companion document that goes with manual might be helpful that has specific details for working with City this may include maps of subsurface conditions (i.e., infiltration potential, protected areas, etc.) this could streamline project planning efforts.
Stormwater Capital Improvement Program	Develop comprehensive stormwater CIP plan including identify projects, design and construction projects, and grant administration (if projects are grant funded).	Currently associated with awarded grants **•Decant Canopy** ·Project Administration: project plan and contract development; contract ad, award, execute; consultant management; construction project management; project inspection ·Grant Administration: develop grant agreement; generate task requirements; quarterly report PRPR; Ecology correspondence **•Appleway Stormwater Improvements** ·Project Development: Hydraulic design; technical support; plan review ·Grant Administration: develop grant agreement; generate task requirements (partial); quarterly report PRPR; Ecology correspondence **•UIC Retrofit with preservation projects** ·Project Development: project technical support; plan review ·Grant Administration: develop grant agreement; generate task requirements (partial); quarterly report PRPR; Ecology correspondence **•Sprague Avenue Stormwater Improvements** ·Project Development: consultant support; project technical support ·Grant Administration: develop grant agreement; quarterly report PRPR; Ecology correspondence **•Sprague Avenue Stormwater Improvements** ·Project Development: consultant support; project technical support ·Grant Administration: develop grant agreement; quarterly report PRPR;	Perhaps the minimum capital improvement could be considered **replacing only those existing capital assets that are in failure.**	•Hydraulic modeling/analysis of hydraulic systems ·Ridgemont Area ·Ponderosa ·Rocky Ridge ·15th and Stanley ·other •Identify plan or strategy to develop remaining Capital Improvement projects identifies. •Have funding included in the rates to develop a more robust CIP plan. This would be a future project
CIP Coordination and Support (non-stormwater capital projects)	Identify if there are partnering opportunities on non-stormwater CIP projects by developing recommendations (project recommendation packet) to resolve known drainage issues or retrofit drywells in the proposed project limits. This work may also include providing technical support during the design phase and review of the drainage aspects of design/construction projects for partners.	• Project Recommendation Packet ·Identify regulatory requirements ·Propose UIC retrofit strategy ·Identify maintenance needs existing facilities ·Identify existing drainage problems ·conduct structure inspection for project ·review GIS inspection data ·review Q-Alert for citizen complaints ·conduct drywell flow or gutter flow tests • Plan Review (annual street projects) • Additional activities charged to stormwater fund include drainage: design calcs, plan development, and documentation/reports.	Same as existing activities	•Develop a nonreactive process (currently the process is reactive) •Identify annual FTE needs for this work and have dedicated staff to support the work. •*Purchase and utilize asset management software* to identify where drainage problems are located within the project limit would reduce the time on this task. Even with the software, stormwater staff will still need to do a field inspection as part of the package development to confirm the field conditions because sometimes its been many years since the drainage issues were identified and inspection is needed to assess if the field conditions have changed. •Develop an enhanced inspection checklist that includes more details about drainage problems including taking photos. Ideally the checklist and photos would be part of an asset management software package. •City Staff will ask the CIP folks if there is more that SW could do on these projects. For example they would like stormwater to provide the drainage report.

Category	General Description	Existing Activities	Minimum Required	Pro-Active
Small Works Program	Projects identified through Q-Alerts to mitigate citizen complaints or maintenance issues. These projects are less than 300K project annually. The work for staff includes: identifying projects, design, PS&E development, construction management, and post-construction inspection.	The program has historically included a 200 - 300K project annually to mitigate citizen complaints and maintenance issues. ·Project Identification ▫citizen complaints - Q-Alert ▫Staff alerts ▫staff reconnaissance ·Project Administration ▫project plan and contract development ▫contract ad, award, and execute ▫construction project management ▫project inspection	same as existing activities	•storm-event reconnaissance plan - planning mechanism •Having staff dedicated to small works would be helpful. •Zero out Q-Alerts or maintenance list each year with justification for why *(time included for this work included in Citizen Complaints Response)*
Citizen Complaints Response	Time for staff to manage Q-Alert program including collecting citizen complaints, field investigations, evaluate City response (do nothing to field modifications), develop plan for response, and action.	Approximately 15 citizen complaints processes per month: •Document in Q-Alert •Field investigation •Historical file research and plan lookup •Continued communication with citizen •communicate with City staff, agencies, contractors •may take years to fully resolve	same as existing activities	•zero out citizen complaints annually either thru small work program or determination of non-warrant (Q-Alert closeout) •Review for consideration standard operating procedure update/revision
GIS/Asset Management/Webpage/Mapping Management	Collect and manage GIS data. This includes data collection in the field and uploading information from reports into GIS; developing maps that help guide planning and design; tracking maintenance activities (when completed and when needed)	•GIS map development o Stormwater: UIC retrofit, MS4 vs UIC, Environmental documentation, grant support, project support, property acquisition, watersheds, stormwater facilities, other o Maintenance: online mapping, road and sidewalk snow removal, roadway landscaping support, weed control support, cracksealing, pothole repair, stormwater facility site maps, other o Traffic support o Floodplain modeling support o Capital Improvement: project support o Data collection, editing, analysis: IDDE, complaints, storm events, spills, storm drain cleaning, inspections, IPAD data collection. *Note summer interns provide data collection in the summer.*	•Map items that fall under critical areas ordinance	•Implement asset management and redevelop programs •for accessibility collect and lazorfiche historical data (randomly stored now with some at the county. They would like to have a library with everything in one place) ·hydraulic reports ·geotech reports ·stormwater design plans •resolve ownership issues regarding COSV/County/WSDOT facilities (Trent SR290 and Pines; there is still questions on who owns what and is responsible for that area. It is defined in maintenance agreements but not fully resolved) •Upgrade mapping ·missing public facilities ·missing shared facilities ·private facilities ·consider upgrade of information collected •develop more robust mobile data collection application •develop more online mapping application •develop pollutant loading roadway map

Category	General Description	Existing Activities	Minimum Required	Pro-Active
Policy and Procedure Development	Develop and manage policies and procedures that support the stormwater management program and improve overall efficiency and consistency.	• Flood plain study support • ordinance update (for all drainage items including MS4 required ordinances) • most of the other activities in this row are being done but they are not necessarily well thought out or complete.	same as existing	•swale modification permit •develop hydraulic library ·hydraulic analysis spreadsheets/programs ·hydraulic report template/examples ·UIC retrofit planning tools ·Erosion Sediment Control tools •review for consideration standard plan updates •Prepare flushing plan requirement •Prepare wastewater plan requirement
Utility Locates	Locate stormwater utilities primarily for developer projects.	None	• hire utility locate company to do this work or have dedicated staff at city to provide this service • Update mapping to confirm all storm drains and all stormwater features are included in GIS (covered in GIS asset management element)	None
Grant Research Development and Administration	Time the City or a consultant spends to develop a grant application, provide grant administration, and develop the project design/construction package.	•no existing activity •match funds for grants they received over the last few years, they have had 6 grants over the last 10 years *(~3 grants per permit cycle)* *•Does not include hours to manage consultant times on grants, this is covered in the Stormwater CIP element.*	none	•Identify plan and frequency for application of grants to supplement Capital Improvement program and UIC retrofit plan •Identify if coordination efforts are required with planning/grants to fulfill •would like a move proactive approach for this especially for high category drywells.
Regulatory Compliance Administration (MS4 and UIC)	Evaluate and identify UIC vs MS4 areas; develop, implement, and update plan for management. These activities are associated with separating the two areas and developing a unique UIC SWMP. *Work associated with developing a MS4 SWMP are included with the MS4 Permit Compliance, specifically S5 Stormwater Management Program for Cities, Towns, and Counties.*	Includes all efforts to manage and impliment MS4 Permit and UIC Rule Requirements. Determine MS4 versus UIC regulatory areas •Determine regulatory interpretation •Develop independent MS4 and UIC SWMP •City-wide hydraulic modeling for discharge to surface waters *Note: many of these activities will only be done once to separate the two areas. Items noted in the Minimum Required column are items that are assumed to be needed for annual maintenance.*	•update the UIC SWMP •Evaluate if there are any changes to the MS4 or UIC areas •Modify programs to support the regulatory determination ·service contracts ·maintenance coordination ·inspection plan •Report on City-wide hydraulic analysis	None
UIC Retrofit Plan and Strategy Administration	Develop, implement, and manage UIC retrofit plan as required per the UIC Rule.	•Update UIC scoring strategy •Update UIC score mapping	Develop and implement a plan for retrofitting High Priority UICs over 40 years.	•Identify a measurable goal to guide UIC retrofit plan •Develop and implement a plan for retrofitting medium and low priority UICs up to a certain amount points. •Retrofit high priority UICs in 20 years.

APPENDIX E

MS4 Permit Compliance Checklist

Permit Section	Complete Permit Requirement Description underline text indicates new 2019-2024 permit requirement, ~~strikeout text indicates deleted item from 2014-2019 permit~~	Type of Permit Requirement (Existing, Modified, New)	Category Type	Compliance Timeframe (immediate or specific date)	Summary of City Activities to Support Compliance	During Interviews: Identify Documents That Demonstrate Compliance with These Activities	City Staff Responsible for this work	Covered in Annual Report Questions (new permit)	Current Program's Permit Requirement Coverage (None, Partial, Meets, Exceeds)	Description of Program Gap & Recommendations for Improvement
S4. Compliance With Standards										
S4.F.3.d	The Permittee shall include with each subsequent annual report the results of any monitoring, assessment or evaluation efforts conducted during the reporting period. If, based on the information provided under this subsection, Ecology determines that modification of the BMPs or implementation schedule is necessary to meet AKART on a site-specific basis, the Permittee shall make such modifications as Ecology directs. In the event there are ongoing violations of water quality standards despite the implementation of the BMP approach of this section, the Permittee may be subject to compliance schedules to eliminate the violation under WAC 173-201A-510(4) and WAC 173-226-180 or other enforcement orders as Ecology deems appropriate during the term of this permit.	Existing	Data Management	Immediately	The City has performed monitoring for a couple of years. This monitoring for Chester Creek was done for internal informational purposes and not submitted to Ecology as an Ecology requirement.	N/A	N/A	Yes	N/A	
S5. Stormwater Management Program For Cities, Towns, and Counties										
S5.A	All Permittees shall develop and implement a Stormwater Management Program (SWMP) during the term of this permit. A SWMP is a set of actions and activities comprising the components listed in S5 and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 Compliance with TMDL Requirements, and S8 Monitoring and Assessment. This section applies to all Cities, Towns and Counties covered under this permit. Where the term "Permittee" is used in this section, the requirements apply to any City, Town or County, whether permit coverage is obtained as a Permittee or as a Co-Permittee.	Modified	Policy Development & Implementation	during the term of the 2019-2024 permit	Yes, a SWMP was developed for the 2019 - 2024 permit cycle. The 2022 SWMP describes planned actions and activities for meeting the S5 permit requirements, additional requirements to meet S7 Compliance, and S8 Monitoring & Compliance.	2022 Stormwater Management Plan	Chad Phillips	Yes	Meets	
S5.A.3	Permittees shall continue implementation of existing stormwater management programs until they begin implementation of the updated stormwater management prog ram in accordance with the terms of this permit, including implementation schedules.	Existing	Policy Development & Implementation	Immediately	The City's 2019 - 2021 SWMPs were provided. Each SWMP was followed until the next year's SWMP was developed and implemented. They City prioritizes the goals that need to be met for the current year. Remaining goals carry over the next year. The City has limited capacity to achieve more than is required each year.	2019 - 2021 Stormwater Management Plans	Chad Phillips	No	Meets	
S5.A.4	Each Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall be organized according to the program components in S5.B or a format approved by Ecology, and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology . The SWMP Plan shall be written to inform the general public of planned SWMP activities for the upcoming calendar year.	Existing	Documentation	March 31st of each year	Yes, the SWMP format includes the program components in S5.B. The plan is updated annually and submitted to Ecology with the annual report. The City provided SWMPs from 2019 - 2022.	2019 - 2022 Stormwater Management Plans	Chap Phillips	Yes	Meets	
S5.A.4.a	Include in SWMP Plan planned activities for each of the program components included in S5.B.1 through S5.B.6	Existing	Documentation		Yes, the SWMP described planned activities for the calendar year.	2022 Stormwater Management Plan	Chap Phillips	No	Meets	
S5.A.4.b	Include in SWMP Plan any additional planned actions to meet the requirements of applicable TMDLs pursuant to S7 Compliance with Total Maximum Daily Load Requirements.	Existing	Documentation	Immediately	N/A - The City has eliminated stormwater outfalls to the Spokane River	2022 Stormwater Management Plan	Chad Phillips	No	N/A	N/A - The City has eliminated stormwater outfalls to the Spokane River and has no TMDL related obligations.
S5.A.4.c	Include in SWMP Plan any additional planned actions to meet the requirements of S8 Monitoring and Assessment.	Existing	Documentation	Immediately	Yes, additional planned activities to meet S8 Monitoring requirements were listed in the 2022 SWMP. The City participates in effectiveness studies in place of monitoring to meet the requirements of S8.	2022 Stormwater Management Plan	Chad Phillips	No	Meets	
S5.A.5.a.i	Each Permittee shall track the number of inspections performed, follow-up actions as a result of inspections, official enforcement actions taken, and types of public education activities implemented as required for each SWMP component. This information shall be included in the annual report.	Modified	Record Keeping	Immediately	No, there is not an ongoing/established program for tracking, maintaining, and using information to evaluate SWMP development and implementation, and permit compliance. The City does not conduct day to day activities based on the permit. Overall, the way the program is developed and ran naturally meets permit requirements. The number of inspections performed, official enforcement actions taken, and types of public education activities implemented for each SWMP component, as required, are provided in the annual report. There is no information in the annual report regarding follow-up actions as a result of inspections. The City did not provide information on how these items are tracked. They City does not have a specific inspection plan. Instead the methodology is to clean each structure/facility. Most of the inspections are for UICs and catch basins. The City focuses on cleaning catch basins in the north and south one year, and then the east and west the following year; therefore each catch basin is cleaned every other year. The City cycles through grids between arterials for UIC cleaning. Curb inlets are cleaned as needed. Swales are inspected and cleaned randomly. There is not a specific plan. The City uses Arc Collector and GIS to track what has been cleaned. Inspection/cleaning date is entered into GIS. City focus on cleaning and not inspecting is a compliance gap.	N/A 2021 Annual Report and Stormwater Facility Inspection Maps	Chad Phillips	No Yes	None Partial	Develop an ongoing/established program for tracking, maintaining, and using information to evaluate SWMP development and implementation, and permit compliance. Formalize the City's current process by documenting existing actions and developing a long-term inspection plan that includes tracking number of inspections performed, follow-up actions as a result of inspections, official enforcement actions taken, and types of public education activities implemented as required for each SWMP component. Tracking may be optimized with an asset management program.
S5.A.5.a.ii	Each Permittee shall track the estimated cost of development and implementation of each component of the SWMP. This information shall be provided to Ecology upon request.	Existing	Record Keeping	Immediately	The City developed a cost estimate for the overall permit, but the specific cost to implement the permit is not tracked. The City estimate is generous. Day to day tasks are not performed based on the permit, unless the permit has a specific requirement, such as the effectiveness studies.	2019 - 2024 EW Municipal Stormwater Permit Implementation Schedule, Estimated Cost of SWMP (S5A4aii) - 2021, Tracking Cost Procedures (2015 Reporting Year)	Chad Phillips	Yes	Meets	This requirement comes from the Clean Water Act. Per conversations with Ecology, Ecology understands the challenges of this requirement and that municipal accounting systems are not SWMP-centric. In the past, Ecology's expectations have been for Permittee's to do the best they can within reason. To strengthen compliance the City can develop a system to track the estimated cost of development and implementation of each SWMP component. The City's previously developed estimated costs and this mock audit spreadsheet can be used as a good starting point.
S5.A.6.a	Coordination among entities covered under this permit is encouraged. The SWMP should shall include coordination mechanisms to encourage coordinated stormwater-related policies, programs and projects within adjoining or shared areas	Existing	Policy Development & Implementation	Immediately	Yes, the City coordinates with the City of Spokane and Spokane County on the SRSM, effectiveness studies, and to create unified E&O messaging/efforts. The City also coordinates with WSDOT and participates in the EWSG meetings. The SWMP does not include mechanisms to encourage coordination on stormwater related policies, programs and project with adjoining or shared areas.	2022 Stormwater Management Plan	Chad Phillips, Aaron Clary, and John Johnson	No	Partial	Identify coordination mechanisms to encourage coordinated stormwater-related policies, programs and projects with entities the City is already working with to meet permit requirements (Spokane County, City of Spokane, SRHD, etc.). Document the City has attempted to establish these mechanisms in good faith in the SWMP if there is no formal agreement. Coordination mechanisms may be formal agreements, or less formal, such as ongoing communication and coordination (e.g., meetings, emails, phone calls) - be sure to document.
S5.A.6.a.i	Coordination mechanisms clarifying roles and responsibilities for the control of pollutants between physically interconnected MS4s covered by a municipal stormwater permit.	Existing	Policy Development & Implementation	Immediately	The City has interconnected areas with the County and area that drains to Spokane's CSO system. All WSDOT area drains to UICs. No, the City does not have coordination mechanisms to clarify roles and responsibilities with other entities for the control of pollutants between physically interconnected MS4s.	N/A	Chad Phillips	No	Partial	Confirm where interconnected MS4 areas exist covered by a municipal permit. Once this area is identified, coordinate with City of Spokane (and other entities, if necessary) to establish and document roles and responsibilities for the control of pollutants.
S5.A.6.a.ii	Coordinating stormwater management activities for shared water bodies or watersheds among Permittees, to avoid conflicting plans, policies and regulations.	Modified	Policy Development & Implementation	Immediately	No, the Permittee does not coordinate stormwater management activities for shared water bodies or watersheds among Permittees, to avoid conflicting plans, policies and regulations.	N/A	Chad Phillips	No	None	Coordinate and document stormwater management activities for shared water bodies or watersheds with other Permittees to avoid conflicting plans, policies and regulations.

S5.A.6.b	The SWMP shall also include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit. Permittees shall include a written description of internal coordination mechanisms in the Annual Report due no later than March 31, ~~2016~~ 2021.	Existing	Documentation	3/31/2021	The City has a document that describes internal coordination among departments within the jurisdiction to eliminate barriers to compliance. The document is included in the annual report. The City is unsure if the document is sufficient.	S8A6b-Internal Coordination Mechanisms-2021 Annual Rpt	Chad Phillips	Yes	Partial	Compliance = the existence and submittal of its written description by 3/31/21 of an internal coordination mechanisms among departments with MS4 permit-related responsibilities. That said, from a business standpoint the document should be evaluated for the effectiveness of these mechanisms, identifying process improvements if/where needed.
S5.B.1 Public Education & Outreach (E&O)										
S5.B	The SWMP shall include the components listed below. To the extent allowable under state and federal law, all components are mandatory for each City, Town, and County covered under this permit, whether covered as an individual Permittee or as a Co-Permittee.	Existing	Documentation	Immediately	The City conducts E&O programs with the following entities: City of Spokane Valley Stormwater Utility, Spokane County Water Resources, Central Valley School District, West Valley Outdoor Learning Center, Spokane Aquifer Joint Board, and the Spokane Regional Health District. Specifically, the City partners with Spokane County Water Resources for programs targeting school-age children & home owners. The City targets the general public through every day communication and targets engineers through development code and stormwater requirements.	2022 Stormwater Management Plan	Aaron Clary	Yes	Meets	
S5.B.1	Permittees shall implement a public education and outreach program ~~to distribute educational materials to the community or conduct equivalent outreach activities~~ designed to educate the target audiences about the impacts of stormwater discharges to water bodies and the steps ~~the public can~~ to take to reduce pollutants in stormwater. Outreach and educational efforts should include a multimedia approach and shall be targeted and presented to specific audiences for increased effectiveness. The education program may be developed and implemented locally or regionally. ~~1.~~ Based on the target audience's demographic, the Permittee shall consider delivering selected messages in language(s) other than English. The minimum performance measures are:	Modified	Policy Development & Implementation	Immediately	The City disseminates E&O information through multiple medias, including street sweeping announcements, Hotline Media Blasts (website, Facebook, Twitter), SRHD business visits, and West Valley Outdoor Learning Center courses. The City also provides information through every day E&O programs are implemented locally and regionally. Materials are only in English, but the City is unaware of a need of materials in another language.	Street sweeping announcements, Hotline Media Blast (website, Facebook, Twitter), SRHD business visits, West Valley Outdoor Learning Center courses	Aaron Clary	Yes	Meets	Consider providing materials in another language, if ever deemed necessary.
S5.B.1.a	All Permittees shall continue to implement a public education and outreach program designed to reach target audiences identified in i-iii and achieve improvements in the target audience's~~s~~' understanding of the problem and what they can do to solve it. The program shall, at a minimum~~, include~~ address the following, based on the land uses and priority target audiences found within the community~~s~~. Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.	Modified	Policy Development & Implementation	Immediately	The City does not have a strategic schedule for E&O efforts. The SRHD conducts business inspections in the spring and summer.	N/A	Aaron Clary	Yes	Partial	Develop and document a strategic or ongoing schedule for providing specific subject area information to different target audiences.
S5.B.1.a.i	Target audiences: ~~Information for the general~~ General public, including, home owners, teachers, school-age children, or overburdened communities. Provide information about the following subject areas. (a) The importance of improving water quality and protecting beneficial uses of waters of the state. (b) The potential impacts from stormwater discharges. (c) Methods for avoiding, minimizing, reducing and/or eliminating the adverse impacts of stormwater discharges. ~~(a)~~(d) Actions individuals can take to improve water quality, including encouraging participation in local environmental stewardship activities and programs.	Modified	Policy Development & Implementation	Immediately	The City partners with Spokane Valley Stormwater Utility, Spokane County Water Resources, and Spokane Aquifer Join Board for implementing E&O programs for the general public. Activities include events, meetings and education, billboards, City media releases, websites, citizen inquiries, and construction project neighborhood meetings. Specific subject material is not provided. These are informal partnerships. There are no formal agreement. The City partners with City of Spokane Valley Stormwater Utility, Spokane County Water Resources, Central Valley School District, West Valley Outdoor Learning Center, and Spokane Aquifer Joint Board for implementing E&O programs for students. Activities include community events, classroom education, student field trips, activity books, brochures, posterboards, watershed model discussion, aquifer atlas, and short sketches. Specific subject material is not provided. These are informal partnerships. There are no formal agreement.	2022 Stormwater Management Plan	Aaron Clary	Yes	Meets	Consider adding E&O efforts for overburdened communities to the existing program. To strengthen compliance, consider clarifying that each subject area (a-d in Column B) is addressed through the existing program when reporting E&O efforts in the SWMP and annual report.
S5.B.1.a.ii	ii. Target audiences: Information for Businesses. and the general public. Provide information, appropriate to the type of business, about: (a) Preventing illicit discharges, including what constitutes illicit discharges. (b) The impacts of illicit discharges. (c) Promoting the proper management and disposal of waste. Targeted business education should include topics appropriate to the type of business, such as the (d) Management of restaurant dumpsters and wastewater. (b)(e) The use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials.	Modified	Policy Development & Implementation	Immediately	The City partners with the Spokane Regional Health District and the Spokane Valley Stormwater Utility to implement E&O programs for businesses. Business types include high schools with foam mats, gyms with foam mats, restaurants/grocery stores, hotel/motel, property management, and automotive. The Utility and SRHD conduct site visits to businesses. During these site visits the required subject areas are addressed (preventing illicit discharges, including what constitutes illicit discharges; the impacts of illicit discharges; promoting the proper management and disposal of waste; management of restaurant dumpsters and wastewater; and the use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials).	SRHD business visits 2021 Word document	Aaron Clary	Yes	Meets	
S5.B.1.a.iii	iii. Target audiences: ~~Information for~~ engineers, construction contractors, developers, development review staff, and land use planners. Provide information about: (a) Technical standards, the development of stormwater site plans and erosion control plans. (b) Infiltration and underground injection control criteria. (c) Low impact development (LID) ~~when it becomes available~~. (d) Stormwater Best Management Practices (BMPs) for reducing adverse impacts from stormwater runoff from development sites. (e) Municipal stormwater code requirements.	Modified	Policy Development & Implementation	Immediately	A specific E&O program is not implemented for engineers, construction contractors, developers, development review staff, and land use planners. E&O efforts are conducted through development code and stormwater requirements.	2022 Stormwater Management Plan	Aaron Clary	Yes	Partial	Develop a specific E&O program by documenting existing E&O efforts for engineers, construction contractors, developers, development review staff, and land use planners. The E&O program should include an improved bridge to the SMMEW for the new UIC and LID criteria through revision of SVMC 22.150.040 language, amendment of the Spokane Regional Stormwater Manual (SRSM) , or adoption of the SMMEW. The E&O program call also be used as a step in the City's escalating enforcement approach.
S5.B.1.b	Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. No later than December 31, 2021. Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the target behaviors. ~~All Permittees shall continue to implement a public education and outreach strategy. The strategy shall be designed to reach all of the target audiences identified within the geographic area of the Permittee's jurisdiction covered under this permit to meet the education and outreach goals listed in (a) above.~~	Modified	Data Management	12/31/2021	Yes, a study was conducted by OCI to measure the understanding and adoption of a targeted behavior (closing dumpster lids when dumpsters are not in use). The results were used to direct E&O resources more effectively. This included developing an informational flier for restaurants and automotive businesses.	2021 Annual Report	Aaron Clary	Yes	Meets	
S5.B.2 Public Involvement and Participation										
S5.B.2	Permittees shall provide ongoing opportunities for public involvement and participation such as advisory panels, public hearings, watershed committees, participation in developing rate-structures, or other similar activities. Permittees shall comply with applicable state and local public notice requirements when developing elements of the SWMP. The minimum performance measures are:	Existing	Policy Development & Implementation	Immediately	They City provides ongoing opportunities for public involvement and participation through city council meetings, public records requests, and public inquiries regarding the City's stormwater program. For city council meetings the council advertises and the public has the opportunity to attend and provide comment. All stormwater documents are available on the website. Although the City does not specifically ask for comments, the public can email the City with questions or comments regarding the documents.	2022 Stormwater Management Plan	Aaron Clary	Yes	Meets	
S5.B.2.a	Permittees shall implement a program or policy directive to create opportunities for the public, including overburdened communities, to provide input during the decision making processes involving the development, implementation and update of the SWMP, including development and adoption of all required ordinances and regulatory mechanisms.	Existing	Policy Development & Implementation	Immediately	The City does not have a specific program or policy directive for ongoing opportunities for the public to participate in the development, implementation, and updates of the SWMP. The City posts the SWMP on the City website by May 31. Yes, the public is provided opportunity to provide feedback for ordinances and regulatory mechanisms through City Council meetings and providing comment through the City's website.	2022 Stormwater Management Plan	Chad Phillips	Yes	Partial	Develop and document program or policy for ongoing opportunities for the public to participate in the development, implementation, and updates of the SWMP. Consider using Spokane Valley Hot Topic mailing to inform public of draft SWMP and provide mechanism for receiving input. Consider methods to identify and reach underserved communities.

S5.B.2.b	No later than May 31 each year, Permittees shall post on their website and make the latest version of the annual report and SWMP Plan available to the public. All other submittals should be available to the public upon request. Co-Permittees and other groups of Permittees that are developing the SWMP in a cooperative effort may post the updated SWMP Plan on a single entity's website.	Existing	Documentation	May 31 each year	Yes, the latest version of the annual report and SWMP are made available to the public through the City's website. The documents can be assessed through the following weblinks: https://www.spokanevalley.org/content/6836/6896/6914/7068/7465.aspx https://www.spokanevalley.org/filestorage/6836/6896/6914/8301/NPDES_Phase_II_-_Annual_Report_2021_Version2.pdf The documents are posted by May 31st of each year.	2022 Stormwater Management Plan	Public Information Officer	Yes	Meets	
S5.B.3 Illicit Discharge Detection and Elimination										
S5.B.3	Each Permittee shall implement and enforce a program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4. The minimum performance measures are:	Existing	Policy Development & Implementation	Immediately	N/A	N/A	N/A	No	N/A	N/A
S5.B.3.a	Each Permittee shall continue to maintain and periodically update a map of the MS4. Update maps if necessary to meet the requirement of this section no later than August 1, 2023. At a minimum, the maps shall include the following information:	Modified	Record Keeping	8/1/2023	Yes, a map of the MS4 is maintained and periodically updated.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	See lines 33-39 for full compliance.
S5.B.3.a.i	Known outfalls and known discharge points. (a) For all known MS4 outfalls, the following attributes shall be mapped: size and material, where known.	New	Record Keeping	8/1/2023	Yes, known outfalls and discharge points are mapped in GIS. Size and material are included in GIS for approximately 75% of the known outfalls and discharge points.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	Close information gaps by update GIS mapping to include missing size and material for all known outfalls and discharge points.
S5.B.3.a.ii	Receiving waters, other than ground.	New	Record Keeping	8/1/2023	Yes, locations of receiving waters are mapped in GIS. The locations of receiving waters continues to evolve as City modeling evolves.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	
S5.B.3.a.iii	Areas served by the MS4 that discharge to ground.	New	Record Keeping	8/1/2023	The areas served by the MS4 that discharge to the ground within the City are swales. Approximately 50% of the swales within the City are mapped in GIS.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	Close information gaps to complete GIS mapping of areas served by the MS4 discharging to the ground, including missing swales.
S5.B.3.a.iv	Permanent stormwater facilities owned or operated by the Permittee.	New	Record Keeping	8/1/2023	Approximately 80% of permanent stormwater facilities owned or operated by the Permittee are mapped in GIS.	N/A	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	Close information gaps by completing GIS mapping of permanent stormwater facilities owned or operated by the City.
S5.B.3.a.v	All connections to the MS4 authorized or approved by the Permittee after August 1, 2019.	New	Record Keeping	8/1/2023	There are no existing connections to the MS4 within the City. The connections within the City are not in the MS4 areas.	N/A	N/A	Yes	N/A	N/A - There are no existing connections to the MS4 within the City. The connections within the City are not in the MS4 areas.
S5.B.3.a.vi	All known connections from the MS4 to a privately owned stormwater system.	New	Record Keeping	8/1/2023	There are no known connections from the MS4 to a privately owned stormwater system within the City.	N/A	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	Once modeling is complete and MS4 area is confirmed, verify there are no connections from the MS4 to privately owned facilities.
S5.B.3.a.vii	~~Field surveys conducted pursuant to the requirements of S5.B.3.c.iii. shall verify outfall and discharge point locations and identify previously unknown outfalls and discharge points on priority water bodies.~~ Connections between the MS4 owned and operated by the Permittee and other municipalities or public entities.	New	Record Keeping	8/1/2023	There are connections within the City to the City of Spokane CSO, but not within the MS4 areas. These connections are mapped in GIS.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	Once modeling is complete and MS4 area is confirmed, verify there are no connections between the MS4 owned and operated by the Permittee and other municipalities or public entities
S5.B.3.a.viii	Permittees shall, upon request and to the extent consistent with national security laws and directives, provide maps and mapping information to Ecology, other entities covered under this permit, other municipalities, and/or federally-recognized Indian Tribes. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by other municipalities, federally-recognized Indian Tribes, Co-Permittees and Secondary Permittees.	Existing	Documentation	8/1/2023	Yes, maps and mapping information are in GIS and meet Ecology mapping standards. Maps or mapping information can be provided to Ecology or other entities covered under this permit, other municipalities, and/or federally recognized Indian Tribes, upon request.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	N/A	
S5.B.3.ix	~~The preferred, but not~~ Beginning August 1, 2021, the required format for mapping is an electronic format (e.g., Geographic Information System, CAD drawings, or other software that can map and store points, lines, polygons, and associated attributes) with fully described mapping standards. ~~An example description is provided on Ecology's website.~~ ~~i. The Permittee shall maintain documentation of the information included in the map, and the map shall be updated periodically.~~	Modified	Policy Development & Implementation	8/1/2021	Yes, an electronic format (GIS) is used for mapping.	2022_MS4 Outfalls & Subbasins Map PDF document	Aaron Clary, GIS Stormwater Staff, City Interns	Yes	Meets	
S5.B.3.b	Each Permittee shall effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the MS4.	Existing	Policy Development & Implementation	Immediately	Yes, *SVMC 22.150 - Stormwater Management Regulations* prohibits non-stormwater discharges into the MS4.	N/A	Chad Phillips	Yes	Meets	
S5.B.3.b.i	Each Permittee shall implement an ordinance or other regulatory mechanism that prohibits illicit discharges and authorizes enforcement actions, including on private property.	Existing	Policy Development & Implementation	2/2/2023	Yes, ordinances that prohibit illicit discharges and authorizes enforcement actions, including on private property include: *SVMC 22.150 - Stormwater Management Regulations* *SVMC 22.150.100 - Property Owner Responsibilities* *SVMC 22.150.110 - Public Drainage Facilities* *SVMC 22.150.120 - Failure to Comply - Nuisance* *SVMC 22.150.130 - Enforcement* Adopted April 8, 2008. www.codepublishing.com/WA/SpokaneValley/ Enforcement ordinances are not specific to illicit discharge. Enforcement ordinances are written to encompass all situations.	2021 Annual Report	Chad Phillips	Yes	N/A	The existing ordinance prohibits unauthorized waters or other liquids onto City property, rights-of-ways, or boarder easements, but does not include language regarding stormwater facilities on private properties or preventing illicit discharges from pollutant-generating sources associated with existing land uses and activities. The ordinances should be updated to include these components to meet permit requirements and to protect discharges to UICs. The next permit cycle is expected to include a Source Control Program requirement, involving appropriate ordinances. The City could choose to include source control ordinances, using similar jurisdictions or the WWA manual as a guide, in the ordinance update for IDDE, resulting in less effort for the next permit cycle.
S5.B.3.b.ii	**Allowable discharges**. The ordinance or other regulatory mechanism does not need to prohibit the following categories of non-stormwater discharges: (a) Diverted stream flows (b) Rising groundwaters (c) Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20)) (d) Uncontaminated pumped ground water (e) Foundation drains (f) Air conditioning condensation (g) Irrigation water from agricultural sources that is commingled with urban stormwater (h) Springs (i) Uncontaminated water from crawl space pumps (j) Footing drains (k) Flows from riparian habitats and wetlands (l) Discharges from emergency firefighting activities in accordance with S2 Authorized Discharges (m) Non-stormwater discharges authorized by another NPDES permit or state waste discharge permit.	Existing	N/A	N/A	N/A	N/A	Chad Phillips	No	N/A	Not a requirement, but the City can consider adding allowable discharges to language in existing code, or defining allowable discharges in a FAQ.

S5.B.3.b.iii	**Conditionally allowable discharges**. The ordinance or other regulatory mechanism may allow the following categories of non-stormwater discharges only if the stated conditions are met: (a) Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. (b) Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities (see S5.B.1.) and water conservation efforts. (c) Dechlorinated swimming pool, spa, and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4. (d) Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see S5.B.1) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used. (e) Other non-stormwater discharges. Other non-stormwater discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee which addresses control of such discharges.	Existing	N/A	N/A	No, the City does not have an ordinance or regulatory mechanism that allow or conditionally allow non-stormwater discharges to waters of the state.	N/A	Chad Phillips	No	N/A	Not a requirement, but the City can consider adding conditionally allowable discharges to language in existing code.
S5.B.3.b.iv	The ordinance or other regulatory mechanism shall further address any category of discharges in (ii) or (iii) above if the discharge is identified as a significant source of pollutants to waters of the State.	Existing	Policy Development & Implementation	2/2/2023	No, there are no ordinances or other regulatory mechanisms that address categories of discharge identified as a significant source of pollutants to waters of the state.	N/A	Chad Phillips	No	N/A	If the City decides to incorporate allowable or conditionally allowable discharges in updated code, be sure code addresses any category of allowable or conditionally allowable discharge that is identified as a significant source of pollutants.
S5.B.3.b.v	The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.	Existing	Policy Development & Implementation	2/2/2023	Yes, *SVMC 17.100 Compliance and Enforcement* includes escalating enforcement procedures. The City has the authority to decide if the enforcement escalates. Procedures have been put into place to administer warnings before fines. A summary of the enforcement is as follows: -Enter into voluntary compliance agreements -Issue notice and order -Require abatement by means of a judicial abatement order -Allow a person responsible to perform community service in lieu of paying civil penalties -Suspend, revoke, or modify any permit issued by the City or deny permit application -Forward written statement to city attorney with recommendation to prosecute	SVMC 17.100 Compliance and Enforcement	Aaron Clary	No	Meets	City can consider developing progressive enforcement policy specific to IDDE.
S5.B.3.b.vi	The Permittee shall implement a compliance strategy that includes informal compliance actions such as public education and technical assistance, as well as the enforcement provisions of the ordinance or other regulatory mechanism where necessary to prevent illicit discharges. To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism ~~may need to~~ shall include the following tools: (a) The application of operational ~~and~~/or structural source control BMPs, or both, for pollutant-generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. The source control BMPs referenced in this subsection are in ~~Volume IV of~~ the ~~2004~~ *Stormwater Management Manual for Eastern Washington* ~~or another technical manual approved by Ecology~~. (b) The maintenance of stormwater facilities which discharge into the Permittee's MS4 in accordance with maintenance standards established under S5B65 where necessary to prevent illicit discharges.	Modified	Policy Development & Implementation	2/2/2023	Yes, there is a compliance strategy that includes informal compliance actions such as public education and technical assistance, where necessary, to prevent illicit discharges. The City begins with a site visit and then a follow up letter, email, or phone call. The follow up includes corrective action that need to be taken and the required timeline. The City is generous with the timeline, unless it is a threat/hazard. The City is able to get most people to comply without escalating enforcement. This strategy is used for both the application of BMPs and maintenance of stormwater facilities.	N/A	Aaron Clary	Yes	N/A	Update the IDDE ordinances to include the application of operational or structural source control BMPs (from the Stormwater Management Manual for Eastern Washington), or both, for pollutant-generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. A compliance strategy that includes informal compliance actions such as public education and technical assistance should also be developed and implemented.
S5.B.3.b.vii	The Permittee's ordinance or other regulatory mechanism in effect as of the effective date of this Permit shall be revised if necessary to meet the requirements of this Section, no later than February 2, ~~2019~~2023.	Existing	Policy Development & Implementation	2/2/2023	Existing ordinances addressing requirements in S5.B.3 will be reviewed and updated, as necessary, by the permit deadline of February 2, 2023.	N/A	Chad Phillips and Aaron Clary	Yes	N/A	Update ordinances addressing requirements in S5.B.3, as necessary, by the permit deadline of February 2, 2023.
S5.B.3.c	Each Permittee shall implement an ongoing program designed to detect and identify illicit discharges and illicit connections into the Permittee's MS4. The program shall include the following components:	Existing	Policy Development & Implementation	Immediately	Yes, an ongoing program has been implemented that is designed to detect and identify illicit discharges and illicit connections to the MS4.	2021 Annual Report	Chad Phillips and Aaron Clary	Yes	Meets	See lines 51 - 59 for full compliance.
S5.B.3.c.i	Procedures for conducting investigations of the Permittee's MS4, including field screening to identify potential sources.	Existing	Operations & Maintenance	Immediately	Illicit discharges are documented in GIS during inspections. If an illicit discharge is found while in the field, Aaron or Chad are informed immediately. Illicit discharges are determined by observation. Testing is then conducted if needed, which is not often.	2021 Annual Report	Chad Phillips and Aaron Clary	Yes	Partial	Document existing procedures for illicit discharge investigations during routine inspections. Add an illicit discharge component to the inspection field report.
S5.B.3.c.ii	Procedures for locating priority areas likely to have illicit discharges, including at a minimum: evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in illicit discharges, including spills.	Existing	Operations & Maintenance	Immediately	Priority areas for locating illicit discharges include MS4 areas. This will be updated based on the City's plan to move forward with independent UIC and MS4 plans. Documented City procedures include: A. Determine MS4 areas discharging to surface waters of the State using existing GIS mapping. B. Determine zone and include on GIS mapping - make areas with Heavy Industrial highest priority. C. Make a visual survey of the MS4 areas that are in industrial or commercial zones to look for areas likely to have large quantities of materials that could result in illicit discharges, including spills. D. Look at where complaints have occurred in the past. E. Note these areas that could have illicit discharges on the map.	Procedures for Locating Priority Areas Likely to Have Illicit Discharges word document	Chad Phillips and Aaron Clary	Yes	Partial	Review approach to screen "high risk" locations and activities to identify ways to improve the process. Update the document, as needed. If a source control program gets introduced in the next permit cycle, this screen can be used to identify priority areas for the program.
S5.B.3.c.iii	Field assessment activities, including outfalls, discharge points, or facilities serving priority areas identified in (ii) above, during dry weather and for the purposes of verifying outfall and discharge point locations and detecting illicit discharges.	Modified	Operations & Maintenance	Immediately	The City does not have field assessment activities for verifying outfall and discharge point locations and detecting illicit discharges. This is done through routine annual inspection/maintenance.	N/A	Chad Phillips and Aaron Clary	Yes	Partial	Develop and document formal procedures for field assessment activities, including outfalls, discharge points, or facilities serving priority areas identified in (ii). Field activities, including inspections, should occur during dry weather to help identify illicit discharges/connections.
S5.B.3.c.iv	Compliance with this provision shall be achieved by: field assessing at least 40~~1~~2% on average of the MS4 within the Permittee's coverage area ~~no later than December 31, 2018 and on average 12%~~ each year ~~thereafter~~ to verify outfall and discharge point locations and detect illicit discharges. Permittees shall track total percentage of the MS4 assessed beginning August 1, 2019 and report by March 31, 2024.	Existing	Operations & Maintenance	3/31/2024	The City does not have a formal inspection program. Instead inspection is completed during maintenance. New outfalls and/or discharge points would be reported during maintenance through storm drain cleaning contract. At least 12% of the MS4 within the Permittee's coverage is cleaned each year; therefore, they are technically inspected. This area will be confirmed when the MS4 and UIC area separation is complete.	2021 Annual Report	Aaron and maintenance (part of FTE)	Yes	Partial	Verify MS4 area upon separation of MS4 area and UIC area. For the MS4 area develop and document formal inspection procedures. This may include developing a checklist and adding it to the maintenance procedures. Develop a process to track inspections and maintain records.
S5.B.3.c.v	A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.	Existing	Documentation	Immediately	Yes, the City's website offers a "Report a Concern" menu selection which allows reporting by "requesting for service" via the Qalert system. A full list of phone numbers are available as well. The City had a dedicated hotline at one time, but determined what they had available through other numbers and the website was sufficient.	Hotline Media Blast 2021 PDF	Aaron Clary	Yes	Meets	
S5.B.3.c.v	Permittees shall document and maintain records of the trainings provided and the staff trained.	Existing	Documentation	Immediately	The City does not have a formal training specifically for illicit discharge detection and elimination; therefore staff training records are not documented and maintained.	N/A	Aaron Clary	Yes	None	Develop a training specific to illicit discharge detection and elimination that includes a method to document and maintain training records.

S5.B.3.c.vi	Permittees shall provide adequate training for all municipal field staff which, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, on the identification of an illicit discharge/connection, and on the proper procedures for reporting and responding, as appropriate, to the illicit discharge/connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.	Existing	Training	Immediately	The City does not have a formal training specifically for all municipal field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, on the identification of an illicit discharge/connection, and the proper procedures for reporting and responding to an illicit connection. There is no follow-up training for staff that addresses changes in procedures, techniques, requirements, or staffing.	N/A	Aaron Clary and Chad Phillips	Yes	None	Develop training specifically for all municipal field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, on the identification of an illicit discharge/connection, and the proper procedures for reporting and responding to an illicit connection. Include follow-up training for staff that addresses changes in procedures, techniques, requirements, or staffing. The program should also include documentation and maintenance of training records. The training materials on the Washington Stormwater Center's website may be a good resource.
S5.B.3.c.vii	Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.	Existing	Training	Immediately	Yes, public employees, businesses, and the general public are informed of hazards associated with illicit discharges and improper disposal of waste per the illicit discharge handouts and media blasts.	Hotline Media Blast 2021 documents, IDDE Information to Public PDF document, illicit discharge handout Word	Aaron Clary	Yes	Meets	
S5.B.3.d	Permittees shall implement an ongoing ~~plan~~ program designed to address illicit discharges, including spills, and illicit connections into the MS4. The plan shall include:	Existing	Operations & Maintenance	Immediately	Yes, the City has an ongoing program implemented that is designed to address illicit discharges, including spills, and illicit connections into the MS4.	Emergency_Hazardous Spill_flow chart PDF document and Non-Emergency_Illicit discharge connection_flow	Aaron Clary	Yes	Meets	See lines 61 - 72 for full compliance.
S5.B.3.d.i	Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge shall be immediately contained and steps to be taken for containment of the discharge.	Existing	Policy Development & Implementation	Immediately	No, the City does not have an ordinance or established procedure for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported.	Emergency_Hazardous Spill_flow chart PDF document and Non-Emergency_Illicit discharge connection_flow chart PDF document	Aaron Clary	No	None	Develop an established procedure for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported. Include procedures to address the evaluation of whether the discharge shall be immediately contained and steps to be taken for containment of the discharge.
S5.B.3.d.ii	Procedures for tracing the source of an illicit discharge, including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.	Existing	Operations & Maintenance	Immediately	Yes, the City has procedures in place for tracing the source of an illicit discharge. Stormwater system is visually inspected during field screening.	IllicitScreeningProgramInspection Word document and WORKFLOW Current Storm	Aaron Clary	No	Meets	
S5.B.3.d.iii	Procedures for eliminating the discharge, including notification of appropriate authorities (including appropriate owners or operators of interconnected MS4s); notification of the property owner; technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.B.3.b.vi, including escalating enforcement and legal actions if the discharge is not eliminated.	Existing	Operations & Maintenance	Immediately	The City has a process for eliminating the discharge which is highlighted in flow charts, but the City does not have formal documented procedures.	Emergency_Hazardous Spill_flow chart PDF document and Non-Emergency_Illicit discharge connection_flow chart PDF document SVMC 22.150 - Stormwater Management Regulations. SVMC 22.150.100 - Property Owner Responsibilities. SVMC 22.150.110 - Public	Aaron Clary	No	Partial	Develop and document formal procedures for eliminating discharges, including technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.B.3.b.vi including escalating enforcement and legal actions if the discharge is not eliminated.
S5.B.3.d.iv	Compliance with the provisions in (i), (ii), and (iii) above, shall be achieved by meeting the following timelines:	Existing	Operations & Maintenance	Immediately	N/A	N/A	Aaron Clary and Chad Phillips	No	Partial	See Lines 65 - 68.
S5.B.3.d.iv.a	Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3.	Existing	Operations & Maintenance	Immediately	The IDDE Flowcharts instruct to call 911 for spills to the ground that pose an immediate threat to health or the environment, but the City has no formal procedure.	Emergency_Hazardous Spill_flow chart PDF document	Aaron Clary and Chad Phillips	Yes	Partial	Update the Spill Response Plan or Illicit Discharge Response Plan to require 911 to be called for spills to the ground that pose an immediate threat to health or the environment.
S5.B.3.d.iv.b	Investigate (or refer to the appropriate agency with the authority to act) within 7 days, any complaints, reports, or monitoring information that indicates a potential illicit discharge.	Existing	Operations & Maintenance	7 days of complaint	Yes, the City has a requirement to investigate within 7 days, any complaints, reports, or monitoring information that indicates a potential illicit discharge. The City tracks all spills with details and photos.	2022 Stormwater Management Plan	Aaron Clary	No	Meets	
S5.B.3.d.iv.c	Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.	Existing	Operations & Maintenance	21 days of report	The City inspects all reports or discoveries of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection; however there is not a specific 21 day requirement.	N/A	Aaron Clary	No	Partial	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.
S5.B.3.d.iv.d	Upon confirmation of an illicit connection, use the compliance strategy outlined in S5.B.3.b.vi in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated.	Existing	Policy Development & Implementation	6 months	The City investigates, eliminates, and documents all reported illicit connections, but there is no formal 6 month compliance strategy.	N/A	Aaron Clary	No	Partial	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to document the efforts to eliminate the illicit connection within 6 months.
S5.B.3.e	Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections to conduct these activities.	Existing	Training	Immediately	The City does not have a formal training program for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections.	N/A	Aaron Clary	Yes	None	Develop a training program for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections. The City can consider combining this with Combine with S5B3c.vi.
S5.B.3.e	Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staff.	Existing	Training	Immediately	The City does not have follow-up training provided as needed to address changes in procedures, techniques, requirements, or staffing.	N/A	Aaron Clary	Yes	None	Develop follow-up training to be provided as needed to address changes in procedures, techniques, requirements, or staffing.
S5.B.3.e	Permittees shall document and maintain records of the training provided.	Existing	Record Keeping	Immediately	The City does not have formal training; therefore records for the training are not documented and maintained.	N/A	Aaron Clary	Yes	None	Develop method to document and maintain training records.

S5.B.3.f	**Recordkeeping:** Each permittee shall track and maintain records of the activities conducted to meet the requirements of this Section. In the annual report, each Permittee shall submit data for all of the illicit discharges, including spills and illicit connections that were found by, reported to, or investigated by the Permittee during the previous calendar year. The summary shall include the information specified in Appendix 7 and WQWebIDDE. Each Permittee may either use their own system or WQWebIDDE for recording this data. Final submittal shall be compatible with and follow the format and data schema described in Appendix 7 and WQWebIDDE.	Modified	Record Keeping	Immediately	Activities conducted to meet the requirements of this section are tracked and maintained in Qalert. This information is then transferred to a spreadsheet and reported at the end of the year.	N/A	Aaron Clary	Yes	Meets	
S5.B.4 Construction Site Stormwater Runoff Control										
S5.B.4	All Permittees shall implement and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that disturb one acre or more, and from construction projects of less than one acre that are part of a larger common plan of development or sale. Public and private projects, including projects proposed by the Permittee's own departments and agencies, shall comply with these requirements. The Permittee shall implement an ongoing process for ensuring proper project review, inspection, and compliance by its own departments and agencies. The minimum performance measures are:	Existing	Policy Development & Implementation	Immediately	Yes, a program is implemented and enforced to reduce pollutants in any stormwater runoff to the MS4 from construction activities that disturb one or more acre or projects that are less than one acre that are part of a larger project. This program is required by the SRSM, which has been adopted by the City. The program is also outlined in S*VMC 22.150 Stormwater Management* Regulations, *24.50 Land Disturbing Activities* , and the SVSS. The City also has an ongoing process for proper project review, inspection, and compliance. An Erosion Control Plan is submitted for review and reviewed by the City. Once a permit is issued the applicant/owner is responsible for hiring a CESCL site inspector to have on site. The City also provides inspections and uses the SVSS, SRSM, and the ECP during inspections. Inspections are documented in SmartGov. The City also receives the CESCL reports in SmartGov.	SVMC, SVSS	Chad Phillips, Chad Riggs, Tyson Schroeder	**Yes**	Meets	
S5.B.4.a	The minimum performance measures are: Permittees shall implement an ordinance or other regulatory mechanism to require erosion and sediment controls, and other construction-phase stormwater pollution controls at new development and redevelopment projects. The ordinance or other regulatory mechanism shall include sanctions to ensure compliance. The ordinance or other regulatory mechanism shall include provisions to review site plans and inspect sites with high potential for sediment transport prior to clearing or grading. The ordinance or other enforceable mechanism to implement (i) through (v), below, shall be adopted and effective no later than December 31, 2022.	Modified	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150, SVMC 24.50, and Ch. 4.9 of the SVSS and have been implemented to require erosion and sediment controls, and other construction-phase stormwater pollution controls at new development and redevelopment projects. SVMC 17.00 provides mechanisms of enforcement. They City can issue a Stop Work order if non-compliance is found. If corrective measures are not taken Code Enforcement can step in and fines can be issued. Applicable ordinances were implemented before December 31, 2022.	SVMC, SVSS	N/A	Yes	N/A	Sites are not currenty inspected prior to clearing and grading. Develop an ordinance or other regulatory mechanism that requires site plans to be reviewed and sites to be inspected prior to clearing and grading for sites with high potential for sediment transport. The City can choose to develop a system to identify sites with high potential for sediment transport and only inspect those sites, or inspect all sites before clearing and grading. Develop and implement ordinane no later than December 31, 2022.
S5.B.4.a.i	The ordinance or other regulatory mechanism shall apply, at a minimum, to construction sites disturbing one acre or more and to construction projects of less than one acre that are part of a larger common plan of development or sale.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.020 Regulatory Activities specifies sites disturbing a minimum of one acre or more and to construction sites of less than one acre that are part of a larger common plan.	SVMC	N/A	No	N/A	
S5.B.4.a.ii	The ordinance or other regulatory mechanism shall require construction operators to adhere, at a minimum, to the requirements of Appendix 1, Core Element#2, including preparation of Construction Stormwater Pollution Prevention Plans (Construction SWPPPs) and application of BMPs as necessary to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150, 24.50, and SRSM require construction operators to adhere to the requirements of Appendix 1, Core Element #2, including preparation of Construction SWPPPs and application of BMPs as necessary to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy AKART requirement. The City has adopted the SRSM and development/construction must follow basic requirements. SRSM meets the requirements of Appendix 1.	2022 Stormwater Management Plan	N/A	No	N/A	For the City's Erosion Control Plans to be equivalent to SWPPPs to meet permit requirements, the 13 elements described in S9.D of the Construction Stormwater Permit must be addressed. ECP requirements listed in the SRSM are out of date and do not include Element 12 - Manage the Project and Element 13 - Protect Low Impact Development (LID) BMPs.
S5.B.4.a.ii.a	The ordinance or other regulatory mechanism shall include requirements for construction site operators to implement appropriate erosion and sediment control BMPs. The ordinance or other regulatory mechanism shall include requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.	Existing	Policy Development & Implementation	12/31/2022	Yes, SRSM Chapter 5 Hydrologic Analysis and Design and Chapter 9 Erosion and Sediment Control Design include requirements for construction site operators to implement appropriate erosion and sediment control BMPs and requirements for construction site operators to control waste. Waste is also managed under source control requirements in SVCM 22.150. The City does not use a specific check list for inspections. The Erosion Control Plan is used instead because each site is unique.	SRSM	N/A	No	Meets	
S5.B.4.a.ii.b	Permittees shall document how the requirements of the ordinance or other regulatory mechanism protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements. Documentation shall include: 1. How stormwater BMPs were selected;. 2. The pollutant removal expected from the selected BMPs;. 3. The technical basis which supports the performance claims for the selected BMPs.; ~~and~~ 4. How the selected BMPs will comply with applicable state water quality standards and satisfy the state requirement to apply AKART prior to discharge. Permittees who choose to use the BMP selection, design, installation, operation and maintenance standards in the Stormwater Management Manual for Eastern Washington ~~(2004)~~, or another technical stormwater manual approved by Ecology, may cite this reference as the sole documentation that the ordinance or regulatory mechanism is protecting water quality, reducing the discharge of pollutants to the MEP, and satisfying state AKART requirements.	Existing	Data Management	12/31/2022	The City has adopted the SRSM as a regulatory mechanism to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements. The City is still working with Ecology for the SRSM to be approved as equivalent to the SWMMEW.	SRSM	N/A	No	Meets	
S5.B.4.a.iii	The ordinance or other regulatory mechanism shall include appropriate, escalating enforcement procedures and actions.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 17.00 includes appropriate, escalating enforcement procedures and actions. The code is not specific to source control, but written to encompass all situations and escalates. The process includes a verbal warning, written warning including required corrective actions, and a Stop Work order (can include fines) if hazard or corrective action is not taken. If compliance has not been met within the specified time frame Code Enforcement steps in.	SVMC	Gloria Mantz and Chad Phillips update ordinances with input from Chad Riggs.	No	N/A	
S5.B.4.a.iv	The Permittee shall implement an enforcement strategy and the enforcement provisions of the ordinance or other regulatory mechanism.	Existing	Policy Development & Implementation	12/31/2022	Yes, the City implements an enforcement strategy that has been documented and submitted per the G20.	G20	Chad Phillips and Tyson Schroeder	No	N/A	
S5.B.4.a.v	The ordinance shall include a provision for access by qualified personnel to inspect construction-phase stormwater BMPs on private properties that discharge to the MS4.	Existing	Policy Development & Implementation	Immediately	Yes, SVCM 22.150.090 and SVSS Chapter 9.91 allow qualified personnel to inspect construction-phase stormwater BMPs on private properties that discharge to the MS4.	SVCM and SSVS	Tyson Schroeder	No	Meets	
S5.B.4.b	Permittees shall implement procedures for site plan review which incorporate consideration of potential water quality impacts.	Existing	Policy Development & Implementation	Immediately	Yes, SVMC 22.150.050 includes procedures for site plan review that incorporate consideration of water quality impacts.	SVMC 22.150.050	N/A	No	Meets	

S5.B.4.b.i	Prior to clearing and construction, Permittees shall review Construction SWPPPs for, at a minimum, all construction sites that disturb one acre or more, or are less than one acre and are part of a larger common plan of development or sale, to ensure that the plans are complete pursuant to the requirements of Appendix 1, Core Element #2. The Construction SWPPP review shall be performed by qualified personnel and shall be performed in coordination with S5.B.5.~~b.i~~c. review of Stormwater Site Plans. ~~• To comply with this provision, Permittees shall keep records of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more, that are approved after the effective date of this permit. Permittees shall keep records of these projects for five years or until construction is completed, whichever is longer.~~	Modified	Policy Development & Implementation	Immediately	SRSM Chapter 11, SVMC 22.150.100 Property Owner Responsibilities, and the City's O&M Plan provide standard O&M requirements that are approved as equal to the SWMMEW. The City's O&M Plan is being updated.	N/A	Chad Riggs	Yes	Meets	See line 77.
S5.B.4.b.i.(a)	If the Permittee chooses to allow construction sites to apply the "Erosivity Waiver" in Appendix 1, Core Element #2, the Permittee is not required to review Construction SWPPPs for individual sites applying the waiver.	Existing	Policy Development & Implementation	Immediately	Construction sites are allowed to apply for the "Erosivity Waiver" per Ecology guidelines and requirements. The City defers to Ecology for "Erosivity Waiver" approval. The City did not receive any "Erosivity Waiver" applications this year.	Construction sites are allowed to apply for the "Erosivity Waiver" per Ecology guidelines and requirements. The City defers to Ecology for "Erosivity	N/A	No	Partial	Develop a process that establishes a communication channel with Ecology to be notified when Ecology has granted a waiver within the City. The City should receive a copy of the applicable documentation and have a process to track and record the waivers.
S5.B.4.b.i(b)	~~Permittees shall provide adequate training for all staff involved in permitting, planning, and review to carry out these provisions.~~ The Permittee shall investigate complaints about sites that apply the Erosivity Waiver in the same manner as it will investigate complaints about sites that have submitted Construction SWPPPs for review pursuant to this section.	Modified	Policy Development & Implementation	Immediately	All complaints are investigated by the City. No sites applied for an Erosivity Waiver this year.	N/A	Tyson Schroeder	Yes	Meets	Review and update the City's ECP requirements.
S5.B.4.c	Permittees shall implement procedures for site inspection and enforcement of construction stormwater pollution control measures. ~~i. Each Permittee shall implement a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records.~~ ~~ii. Permittees shall provide adequate training for all staff involved in plan review, field inspection and enforcement to carry out the provisions of this SWMP component. The training records to be kept include dates, activities or course descriptions, and names and positions of staff in attendance.~~	Existing	Policy Development & Implementation	Immediately	Yes, procedures implemented for site inspection and enforcement of construction stormwater pollution control measures. These are found in SVMC 22.150.080. The City also describes these procedures in detail as part of the G20 response regarding this matter.	2021 Annual Report	N/A	Yes	Meets	
S5.B.4.c.i	All new construction sites that disturb one acre or more, or are part of a larger common plan of development or sale, shall be inspected ~~at least once~~ by qualified personnel:. ~~• To comply with this provision, Permittees shall keep records of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more, that are approved after the effective date of this permit.~~ ~~• Permittees shall keep project records for five years or until construction is completed, whichever is longer.~~	Modified	Policy Development & Implementation	Immediately	Yes, all new construction sites that disturb one acre or more, or are part of a larger plan are inspected at least once. The City reported 12 inspections in the MS4 area during the last reporting period and approximates another 100 inspections occurred outside of the MS4 area. All inspections are tracked in SmartGov.	N/A	Tyson Schroeder	Yes	Meets	
S5.B.4.c.i.(a)	Prior to clearing and grading for construction if a high potential for sediment transport is determined.	New	Policy Development & Implementation	Immediately	No, the City does not inspect prior to clearing and grading for sites with high potential for sediment transport.	N/A	Tyson Schroeder	Yes	None	Develop process to determine sites with high potential for sediment transport. Create policy to inspect sites with high potential for sediment transport prior to clearing and grading for construction.
S5.B.4.c.i(b)	During construction to verify proper installation and maintenance of required erosion and sediment controls. Follow-up, as necessary, based on the inspection.	New	Policy Development & Implementation	Immediately	Yes, sites are inspected during construction to verify proper installation and maintenance of required erosion and sediment controls. Follow-up inspections are conducted if a correction is needed. City works with the CESCL inspector to make sure necessary corrective actions are taken. City will inspect again after corrections are made. City also conducts random site inspections for active sites (visits each active site approximately once per week).	N/A	Tyson Schroeder		Meets	
S5.B.4.c.i.(c)	Compliance with this inspection requirement will be determined by the Permittee having and maintaining records of an inspection program that is designed to inspect all sites. Compliance during this permit term will be determined by the Permittee achieving an inspection rate of at least 80% of the sites.	Existing	Record Keeping	Immediately	Inspections are documented and tracked through SmartGov. 100% of construction sites are inspected, meeting the greater than or equal to 80% requirement.	N/A	Tyson Schroeder	Yes	Exceeds	
S5.B.4.d	Each Permittee shall ensure that all staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.	New	Training	Immediately	All staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites are CESCL certified. The City also has ongoing site specific education and training that mostly consists of peer to peer mentoring. There is no schedule for training for specific topics, but rather when needed. Formal training, such as CESCL is documented including those who attend, training topics, and signatures. There is no documentation for the site specific peer to peer training.	CESL Training Cards 2021 PDF Document and Staff Training - 4-6-22 PDF document	Chad Riggs and Tyson Schroeder	Yes	Partial	Document site specific training, including who attended, role, and topics covered.
S5.B.4.e	Permittees shall provide information to construction site operators about training available on how to install and maintain effective erosion and sediment controls and how to comply with the requirements of Appendix 1 and apply the BMPs described in ~~Chapter 7~~ of the Stormwater Management Manual for Eastern Washington ~~(2004)~~, or another technical stormwater manual approved by Ecology.	Existing	Training	Immediately	The City provides a Pre-Application Review Letter which provides a reference to the SRSM and a reference to the DOE Construction Stormwater permit. The standard Pre Construction Meeting letter provides information on how to comply with ESC requirements. The COSV website provides a link to the DOE CESCL website, a link to the SRSM and a link to the COSV Stormwater codes.	2021 Annual Report	John Johnson	Yes	Meets	
S5.B.4.f	To comply with these provisions, Permittees shall keep records of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records.	New	Record Keeping	Immediately	Yes, records are kept of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more where inspections and enforcement actions occurred by Permittee staff, including inspection reports, warning letters, notices of violations, and other enforcement records. These records are kept in project files and tracked in SmartGov.	N/A	Tyson Schroeder	Yes	Meets	
S5.B.4.f.i	Permittees shall keep records of the site plan review, inspections, and any enforcement actions, including inspection reports, warning letters, notices of violations, and other enforcement records for these projects, for five years or until construction is completed, whichever is longer.	New	Record Keeping	Immediately	Yes, hard copies of site plan review, inspections, and any enforcement actions, including inspection reports, warning letters, notices of violations, and other enforcement records for these projects are kept according to State requirements for document retention as detailed in SVMC 22.120.020 (six years). Project documentation in SmartGov is never deleted.	N/A	Tyson Schroeder	Yes	Meets	
S5.B.4.f.ii	The staff training records to be kept include dates, activities or course descriptions, and names and positions of staff in attendance.	New	Record Keeping	Immediately	Yes, the City keeps records for CESCL training, but has not documented other trainings. The City will document other trainings moving forward.	CESL Training Cards 2021 PDF Document and Staff Training - 4-6-22 PDF document	John Johnson	Yes	Partial	Document ALL training - even site specific mentorship. Include dates, activities or course descriptions, and names and positions of staff in attendance.
S5.B.4.f.iii	Permittees shall keep copies of information provided to construction site operators, and if information is distributed to a large number of design professionals at once, the dates of the mailings and lists of recipients.	New	Record Keeping	Immediately	The City keeps records of Pre-Application Letters and notes from Pre-Construction meetings that include information provided to construction site operators. Information is not mass distributed.	N/A	Tyson Schroeder	Yes	Meets	Document dates of the mailings and lists of recipients if information is distributed to a large number of design professionals at once.

S5.B.4.f.iv	If the Permittee chooses to allow construction sites to apply the "Erosivity Waiver" in Appendix 1, Core Element #2, the Permittee shall keep a record of all construction sites that provide notice to the Permittee of their intention to apply the waiver. ~~The Permittee shall investigate complaints about these sites in the same manner as it will investigate complaints about sites that have submitted Construction SWPPPs for review pursuant to S5.B.4.b.i. above.~~	New	Record Keeping	Immediately	No, the City does not have a process to document sites that have applied for the Erosivity Waiver. The City has not received any applications.	N/A	Chad Riggs	Yes	Partial	Develop a process to keep a record of all construction sites that provide notice to Ecology of their intention to apply for the waiver. This will require developing a communication channel with Ecology to be notified when Ecology has granted a waiver within the City.
S5.B.5 Post Construction Stormwater Management										
S5.B.5	All Permittees shall implement and enforce a program to address post-construction stormwater runoff to the MS4 from new development and redevelopment projects that disturb one acre or more, and from projects of less than one acre that are part of a larger common plan of development or sale. The program shall ensure that controls to prevent or minimize water quality impacts are in place. Public and private projects, including projects proposed by the Permittee's own departments and agencies, shall comply with these requirements. The Permittee shall implement an ongoing process for ensuring proper project review, inspection, and compliance by its own departments and agencies. The minimum performance measures are:	Existing	Policy Development & Implementation	Immediately	Yes, the City has an enforcement program currently implemented to address post-construction stormwater runoff to the MS4 from new development and redevelopment projects that disturb one acre or more. This program is outlined in SVMC 22.150, SRSM, and SVSS Chapter 4. The program ensures that controls to prevent or minimize water quality impacts are in place, and that public and private projects, including projects proposed by the Permittee's own departments and agencies, comply with these requirements.	SVMC 22.150, SRSM, and Spokane Valley Street Standards Chapter 4	Chad Riggs	No	Meets	
S5.B.5.a	No later than December 31, 2022, Permittees shall implement an ordinance or other regulatory mechanism that requires post-construction stormwater controls at new development and redevelopment projects. The ordinance or other regulatory mechanism shall include ~~sanctions~~ mechanisms to ensure compliance. The local program shall be adopted no later than December 31, 2022 to meet the requirements of S5.B.5.~~.a.ii(a) and (b)(2).~~i.-v below shall apply to all applications submitted ~~after December 31, 2017 and shall apply to projects approved ; Prior to January 1, 2018, which have not started construction by December 31, 2022~~. i. On or after January 1, 2023. ii. Prior to January 1, 2018, which have not started construction by December 31, 2023. iii. Prior to January 1, 2023, that have not started construction by December 31, 2027.	Modified	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.60 - Condition of Approval and SRSM 2.2.3 requires post-construction stormwater controls at new development and redevelopment projects. The ordinance includes mechanisms to ensure compliance. Ordinance language to be reviewed and updated, if necessary.	SVMC 22.150.60 - Condition of Approval	N/A	Yes	N/A	
S5.B.5.b	The ordinance or other enforceable mechanism shall include, at a minimum:	New	Policy Development & Implementation	12/31/2022	N/A	N/A	N/A	Yes	N/A	N/A
S5.B.5.b.i	The ordinance or other regulatory mechanism shall apply, at a minimum, to new development and redevelopment sites that discharge to the MS4 and that disturb one acre or more or are less than one acre and are part of a larger common plan of development or sale.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.020 Regulated Activities applies to new development and redevelopment sites that discharge to the MS4 and that disturb one acre or more or are less than one acre.	SVMC	N/A	Yes	N/A	
S5.B.5.b.ii	The ordinance or other regulatory mechanism shall require project proponents and property owners to adhere to the minimum technical requirements in Appendix 1 and shall include BMP selection, design, installation, operation, and maintenance standards necessary to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.040 and SRSM Chapter 2 Basic Requirements requires project proponents and property owners to adhere to the minimum technical requirements in Appendix 1. The SRSM includes BMP selection, design, installation, operation, and maintenance standards necessary to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements.	SVCM 22.150.040 and SRSM	N/A	Yes	N/A	
S5.B.5.b.ii.(a)	All Permittees shall implement a policy of encouraging project proponents to maintain natural drainages to the ~~maximum extent possible~~MEP, including minimizing the disturbance of native soils and vegetation and reducing the total amount of impervious surfaces created by the project. ~~No later than December 31, 2017,~~ Permittees shall allow non-structural preventive actions and source reduction approaches such as Low Impact Development (LID) techniques, measures to minimize the creation of impervious surfaces and measures to minimize the disturbance of native soils and vegetation. Provisions for LID should take into account site conditions and long term maintenance.	Modified	Policy Development & Implementation	12/31/2022	Yes, SRSM 8.3.4 encourages project proponents to maintain natural drainages to the MEP, but does not encourage minimizing the disturbance of native soils and vegetation and reducing the amount of impervious surface. SVMC 22.150.040, SRSM 6.2.1, SRSM 6.8 allow LID - the City currently only allows bioinfiltration and proprietary options. Better bridge needs to be developed between SRSM and Ecology manual to incorporate more BMP types.	SVMC 22.150, SRSM, 2021 Annual Report	N/A	Yes		
S5.B.5.b.ii.(b)	The ordinance or other regulatory mechanism shall include requirements for project proponents and property owners to implement appropriate runoff treatment, flow control, and source control BMPs considering the proposed land use at the site to minimize adverse impacts to water quality.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.030, SVMC 22.150.040, SRSM 2.2.3 & 2.2.4 includes requirements for project proponents and property owners to implement appropriate runoff treatment, flow control, and source control BMPs considering the proposed land use at the site to minimize adverse impacts to water quality.	SVMC 22.150 and SRSM	N/A	Yes	N/A	
S5.B.5.b.ii.(b)(1)	Each Permittee shall implement a specific hydrologic method or methods for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review. Permittees may allow proponents of unique or complex projects to use other methodologies.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.030, 22.150.040 and SRSM Chapter 5 specify hydrologic methods required for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review.	SVMC 22.150.040 and SRSM	N/A	No	N/A	
S5.B.5.b.ii.(b)(2)	~~No later than December 31, 2017,~~ Permittees ~~must~~ shall require projects approved under S5.B.5 to retain runoff generated on-site for, at a minimum, the 10-year, 24-hour rainfall event or a local equivalent. Permittees may meet this requirement using on-site or regional stormwater facilities.	Existing	Policy Development & Implementation	12/31/2022	Yes, SRSM 2.2.4 Basic Requirement 4 - Flow Control: Design Criteria - The NRCSType IA 24-hour storm event is the design storm for all flow control facilities that use a surface discharge or a combined surface and subsurface system. Flow control facilities that use only infiltration into the subsurface may use either the NRCS Type IA or Type II 24-hour storm event. Infiltration Facilities: For projects proposing infiltration, the facilities shall be designed based on the 10-year design storm event.	2021 Annual Report and SRSM Section 2.2.4	N/A	Yes	N/A	
S5.B.5.b.ii.(b)(3)	Not listed as this permit requirement only applies to new permittees.	N/A	N/A	N/A	N/A	N/A	N/A		N/A	
S5.B.5.b.ii.(b)(4)	To meet the requirements of Appendix 1, Core Element #5 (Runoff Treatment) and Core Element #6 (Flow Control), Permittees ~~may choose to~~ shall apply the definitions, ~~and~~ requirements ~~in Chapter 2.2.5 and 2.2.6 of~~ methods in the Stormwater Management Manual for Eastern Washington~~, (2004), or portions thereof, and the methods described in Chapters 4 and 6 of the Stormwater Management Manual for Eastern Washington (2004),~~ or another technical stormwater manual approved by Ecology.	Modified	Policy Development & Implementation	12/31/2022	Yes, the City has adopted the SRSM. Section 2.2.3 and 2.2.4 outline requirements for water quality and flow control, respectively. Requirements are also outlined in Chapters 5 and 6.	SRSM	N/A	Yes	N/A	
S5.B.5.b.ii(c)	The ordinance or other regulatory mechanism shall include requirements to ensure adequate ongoing long-term operation and maintenance of the BMPs approved by the Permittee.	Existing	Policy Development & Implementation	Immediately	Yes, SRSM Chapter 11 *Maintenance, Tracts, Easements* and SVMC 22.150.100 *Property owner responsibilities* includes requirements to ensure adequate ongoing long-term operation and maintenance of the BMPs approved by the Permittee.	SRSM	N/A	No	N/A	
S5.B.5.b.ii(d)	Permittees shall document how the requirements of the ordinance or other regulatory mechanism protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements. Documentation shall include: (1) How stormwater BMPs were selected; (2) The pollutant removal expected from the selected BMPs; (3) The technical basis which supports the performance claims for the selected BMPs; and (4) How the selected BMPs will comply with applicable state water quality standards and satisfy the state requirement to apply AKART prior to discharge.	Existing	Data Management	Immediately	The City has adopted the SRSM, which documents the requirements to protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements.	SRSM	N/A	Yes	Meets	

S5.B.5.b.ii.(b)	Permittees who choose to use the BMP selection, design, installation, operation and maintenance standards in the Stormwater Management Manual for EWA or another technical manual approved by Ecology, may cite this reference as the sole documentation that the ordinance or regulatory mechanism is protecting water quality, reducing the discharge of pollutants to the MEP and satisfying state AKART requirements.	Existing	Policy Development & Implementation	Immediately	The City has adopted the SRSM, which has been approved as equivalent to the Stormwater Management Manual for EWA. The SRSM documents BMP selection, design, installation, operation and maintenance standard.	SRSM	N/A	No	Meets	
S5.B.5.b.iii	The ordinance or other regulatory mechanism shall include provisions for both construction-phase and post-construction access for Permittees to inspect stormwater BMPs on private properties that discharge to the MS4. If deemed necessary for post-construction access, the ordinance or other regulatory mechanism may, in lieu of requiring that continued access be granted to the Permittee's staff or qualified personnel, instead require private property owners to provide annual certification by a qualified third party that adequate maintenance has been performed and the facilities are operating as designed to protect water quality.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 22.150.090 *Inspection,* 17.100.030 *Enforcement, authority, and administration,* 17.100.320 *Abatement* , and SVSS Chapter 11 *Maintenance, Tracts, Easement* s includes provisions for both construction-phase and post-construction access for the Permittee to inspect stormwater BMPs on private properties that discharge to the MS4. Ordinance does not specify a qualified third-party providing an annual certification for adequate maintenance.	2022 Stormwater Action Plan - SVMC 22.150.090 Inspection and Spokane Valley Street Standards Chapter 9	N/A	Yes	N/A	
S5.B.5.b.iv	The ordinance or other regulatory mechanism shall include appropriate, escalating enforcement procedures and actions.	Existing	Policy Development & Implementation	12/31/2022	Yes, SVMC 17.100 *Compliance and enforcement* and 22.150.120 *Failure to comply - Nuisance* includes appropriate, escalating enforcement procedures and actions.	SVMC 17.100 Compliance and Enforcement	N/A	No	N/A	
S5.B.5.b.v	The Permittee shall implement an enforcement strategy and the enforcement provisions of the ordinance or other regulatory mechanism.	Existing	Policy Development & Implementation	12/31/2022	Yes, the City implements the enforcement strategy and the enforcement provisions outlined in SVMC 17.100 *Compliance and enforcement* and 22.150.120 *Failure to comply - Nuisance.*	N/A	Chad Riggs	No	N/A	
S5.B.5.c	Permittees shall implement procedures for site plan review which incorporate consideration of potential water quality impacts.	Existing	Policy Development & Implementation	Immediately	Yes, the SVMC 22.150.010 *Finding and purpose* and SRSM Chapter 2 *Basic Requirements* implement procedures for site plan review which incorporate consideration of potential water quality impacts.	SVMC 22.150 and SRSM	Chad Riggs	No	Meets	
S5.B.5.c.i	Prior to clearing or construction, Permittees shall review Stormwater Site Plans for, at a minimum, all new development and redevelopment sites that meet the thresholds in S5.B.5.ba.i to ensure that the plans include stormwater pollution prevention measures that meet the requirements in S5.B.5.ab.ii. ~~To comply with this provision, Permittees shall keep records of all projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is one acre or more, that are approved after the effective date of this permit. Permittees shall keep records of these projects for five years or until construction is completed, whichever is longer.~~	Modified	Policy Development & Implementation	Immediately	Yes, the City reviews Stormwater Site Plans for all new development and redevelopment sites that meet the thresholds in S5.B.5.b.i to ensure that the plans include stormwater pollution prevention measures that meet the requirements in S5.B.5.b.ii. This requirement is outlined in SVMC 22.150.020 *Regulated activities,* 22.150.030 *Authority to develop and administer standards,* and 22.150.050 *Review Process.*	2021 Annual Report and SRSM Chapter 9	Chad Riggs	No	Meets	
S5.B.5.c.ii	The site plan review shall be performed by qualified personnel and shall include review of Construction Stormwater Pollution Prevention Plans where required pursuant to S5.B.4.b.i.	Existing	Policy Development & Implementation	Immediately	Yes, site plans are reviewed by qualified personnel at the City per 22.150.030 *Authority to develop and administer standards* , and 22.150.050 *Review Process* . The City requires Erosion and Sediment Control Plans instead of Construction Stormwater Pollution Prevention Plans.	SVMC	Chad Riggs	No	Meets	
S5.B.5.d	Permittees shall implement procedures for site inspection and enforcement of post-construction stormwater control measures.	Existing	Policy Development & Implementation	Immediately	Yes, the City has implemented site inspection and enforcement of post-construction stormwater control measures. These procedures are outlined in the following sections of Chapter 9 in the SVSS: SVSS 9.4.1 *Responsibilities - Development Inspector.* SVSS 9.4.2 *Responsibilities - On - Site Inspector.* SVSS 9.9 *Required Inspections.* SVSS 9.11 *Final Walk-Through.*	SVSS	Chad Riggs	Yes	Meets	
S5.B.5.d.i	Structural BMPs shall be inspected at least once during installation and upon final installation or upon completion of the project, by qualified personnel. ~~The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. At a minimum, inspection and enforcement procedures shall be applied to all new development and redevelopment sites that meet the thresholds in S5.B.5.a.i.~~	Modified	Policy Development & Implementation	Immediately	Yes, all structural BMPs are inspected by qualified personnel at least once during installation and upon final installation or completion of the project. These requirements are outlined in Chapter 9 *Erosion and Sediment Control Design* of the SVSS and SVMC 22.150.090 *Inspection* . SRSM 9.4.1 *Responsibilities - Development Inspector.* SRSM 9.4.2 R*esponsibilities - On - Site Inspector* . SRSM 9.9 *Required Inspections.* SRSM 9.11 *Final Walk-Through.*	2021 Annual Report and SRSM Chapter 9	Tyson Schroeder or John Johnson?	Yes	Meets	None.
S5.B.5.d.ii	Structural BMPs shall be inspected at least once every five years after final installation, or more frequently as determined by the Permittee to be necessary to prevent adverse water quality impacts, to ensure that adequate maintenance is being performed. The inspection shall be performed by qualified personnel.	Existing	Policy Development & Implementation	Immediately	No, it is not City practice to inspect structural BMPs at least once every 5 years after final installation, unless there is an emergency or failure to maintain. There are only approximately 5 facilities within the MS4 area. The City submitted a G20 for this requirement. Ecology disagrees on the City's response.	N/A	Chad Phillips and Chad Riggs	Yes	None	Develop ordinance to require structural BMPs to be inspected at least once every 5 years after final installation, or more frequently as determined by the Permittee. Create program and schedule to inspect structural BMPs within the MS4 area once every five years.
S5.B.5.d.iii	Recommended operation and maintenance standards for structural BMPs in the Stormwater Management Manual for Eastern Washington ~~(2004)~~, or another technical stormwater manual approved by Ecology, shall be met. ~~If a BMP is not inspected, the Permittee is not in violation of this provision unless a violation of water quality standards occurs due to lack of operation and maintenance of the facility.~~	Modified	Policy Development & Implementation	Immediately	SRSM Chapter 11, SVMC 22.150.100 *Property Owner Responsibilities* , and the City's O&M Plan provide standard O&M requirements that are approved as equal to the SWMMEW. The City's O&M Plan is being updated.	SRSM Chapter 11	Chad Phillips and Chad Riggs	No	Partial	Include updated O&M standards that meet those recommended in the Stormwater Management Manual for EWA in the City's updated O&M Plan.
S5.B.5.d.iv	If a site is inspected and problems are identified, the Permittee is not in violation of this provision, provided the Permittee requires and confirms that necessary operation, maintenance and/or repair to correct the problem is performed as soon as practicable.	Existing	Policy Development & Implementation	Immediately	The City does not have an established procedure for documentation, reporting, and repairs when a site is inspected and problems are identified. If the City receives a complaint, the facility is inspected and the responsible party is notified of required correction. Code Enforcement gets involved if necessary.	N/A	Chad Phillips and Chad Riggs	No	Partial	Include methods for documentation, reporting, and repair procedures for situations where a site is inspected and problems are identified in structural BMP inspection program.
S5.B.5.e	Permittees shall provide adequate training for all staff involved in permitting, planning, review, inspection, and enforcement to carry out the provisions of this SWMP component.	Existing	Training	Immediately	City staff involved in permitting, planning, review, inspection, and enforcement are trained by reviewing guidelines in the SRSM, SVSS, and SVMC. Staff also reviews examples and start with introductory level reviews. If a new requirement affects this process Chat Phillips would let Chad Riggs know.	2021 Annual Report, CESL Training Cards 2021 PDF Document and Staff Training - 4-6-22 PDF document	Chad Riggs	Yes	Partial	Develop formal training for all staff involved in permitting, planning, review, inspection, and enforcement. The City already conducts informal training, but needs to document the process.
S5.B.5.f	Permittees shall provide information to design professionals about training available on how to comply with the requirements of Appendix 1 and apply the BMPs described in the Stormwater Management Manual for Eastern Washington ~~(2004),~~ or another technical stormwater manual approved by Ecology.	Existing	Training	Immediately	Yes, information is provided to professionals regarding how to comply with the requirements of Appendix 1 and apply the BMPs described in the SRSM and SWMMEW. Pre-Application Review Letter provides a reference to the SRSM and a reference to the DOE Construction Stormwater permit. The standard PreConstruction Meeting letter provides information on how to comply with ESC requirements. All projects meeting the regulatory threshold the City requires the ESC Standard Plan Notes from Appendix 9A of the SRSM on all plan sets. The ESC Notes provides Construction Site Operators information on how to manage and comply with ESC requirements. The City website provides a link to the DOE CESCL website, a link to the SRSM and a link to the COSV Stormwater codes.	2021 Annual Report	Chad Riggs and Jasmine	Yes	Partial	Develop method to provide information to design professionals about training available on how to comply with the requirements of Appendix 1 and apply the BMPs described in the EWA Stormwater Manual. This may be an opportunity to combine this requirement with E&O requirements by creating a targeted E&O campaign for design professionals.
S5.B.5.g	To comply with these provisions, Permittees shall keep records of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more, ~~that are approved after the effective date of this permit.~~	Modified	Record Keeping	Immediately	Yes, the City keeps records of all projects disturbing one acre or more, and all projects of any size that are part of a common plan of development or sale that is one acre or more. Records are kept in project documents and in SmartGov.	N/A	Chad Riggs	No	Meets	
S5.B.5.g.i	Permittees shall keep project records for five years or until construction is completed, whichever is longer, with the following exceptions: approved site plans and O&M plans shall be kept as needed to comply with the ongoing inspection requirements of this permit.	Existing	Record Keeping	Immediately	Yes, project records are kept according to State requirements for document retention as detailed in SVMC 22.120.020 (six years). Project documentation in SmartGov is never deleted.	N/A	Chad Riggs	No	Meets	

S5.B.5.g.ii	The training records to be kept ~~(for d,(e) above)~~ include dates, activities or course descriptions, and names and positions of staff in attendance.	Existing	Record Keeping	Immediately	No, the City does not have formal training; therefore, no training records are kept that include dates, activities or course descriptions, and names and positions of staff in attendance.	2021 Annual Report, CESE Training Cards 2021 PDF Document and Staff Training - [illegible]	Chad Riggs	No	None	Include a process in the training development to document and keep training records that include dates, activities or course descriptions, and names and positions of staff in attendance.
S5.B.5.g.iii	Permittees shall keep copies of information that is provided to design professionals (for e, above); and, if information is distributed to a large number of design professionals at once, the dates of the mailings and lists of recipients.	Existing	Record Keeping	Immediately	Copies of information provided to design professionals, including Pre-Application Letters and Pre-Construction Meeting notes are uploaded to SmartGov and delivered to the applicant.	N/A	Chad Riggs	No	Meets	
S5.B.6 Municipal Operations and Maintenance										
S5.B.6	Permittees shall implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The minimum performance measures are:	Existing	Operations & Maintenance	Immediately	N/A	N/A	N/A	No	Meets	
S5.B.6.a	Permittees shall implement a schedule of municipal Operation and Maintenance activities (an O&M Plan). Permittees shall review and, if needed, update the O&M Plan no later than ~~August 1~~December 31, ~~2017~~ 2022. The schedule shall include BMPs that, when applied to the municipal activity or facility, will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy state AKART requirements. ~~Chapter 8 of~~ The Stormwater Management Manual for Eastern Washington provides a selection of appropriate BMPs that meet these requirements for various types of facilities. Operation and maintenance standards in the O&M Plan shall be at least as protective as those included in ~~Chapters 5, 6, and 8~~ of the Stormwater Management Manual for Eastern Washington ~~(2004)~~, or another technical stormwater manual approved by Ecology. Record keeping shall be done pursuant to the requirements in S9 Reporting and Recordkeeping.	Existing	Record Keeping	Immediately	The City is separating the MS4 activities from the UIC activities. O&M manual for each are being developed. The City's O&M is covered under vactoring, sweeping, and swale maintenance contracts. Schedule follows these contracts. The City inspects/maintains the CBs along arterials in the east/west on year and the north/south the following year. With the remaining budget, the City inspects/maintains drywells within the grids. The City inspects/maintains all drywells in approx. 5 years. The schedule does not necessarily follow EWA manual recommendations.	Stormwater Facilities O&M Plan_updated 2018 PDF document	Aaron Clary (to prepare maps), Shane Arlt, Brandt	Yes	N/A	Update O&M Plan for MS4 area and UIC area by December 31, 2022.
S5.B.6.a.i	The O&M Plan shall include appropriate pollution prevention and good housekeeping procedures for all of the following types of facilities and/or activities listed below.	Existing	Record Keeping	12/31/2022	N/A	N/A	N/A		N/A	
S5.B.6.a.i.(a)	**Stormwater collection and conveyance systems**, including: • Catch basins • Stormwater sewer pipes • Open channels • Culverts • Structural stormwater controls, and structural runoff treatment and/or flow control facilities The O&M Plan shall address, but is not limited to: • Regular inspections • Cleaning • Proper disposal of waste removed from the system in accordance with Appendix 6 – Street Waste Disposal • Recordkeeping Permittees shall implement catch basin cleaning, stormwater system maintenance, scheduled structural BMP inspections and maintenance, and pollution prevention/good housekeeping practices. Decant water shall be disposed of in accordance with Appendix 6 – Street Waste Disposal.	Existing	Operations & Maintenance	12/31/2022	The City's O&M Plan includes appropriate pollution prevention and good housekeeping procedures for catch basins & structural BMPs for runoff treatment and flow control. The City does not spend a lot of time inspecting and maintaining pipes and culverts. Pipes and culverts will be cleaned if there is an issue. The City's updated O&M plans will provide more specific guidance and an actual plan.	Stormwater Facilities O&M Plan_updated 2018 PDF document	John Johnson & Chad Phillips		N/A	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address collection and conveyance systems, including pipes and culverts.
S5.B.6.a.i.(b)	**Roads, highways, and parking lots.** The O&M Plan shall address, at a minimum: Street cleaning, Deicing, Anti-icing, and snow removal practices: Snow disposal areas and runoff from snow storage areas, Material (e.g. salt, sand, or other chemical) storage areas.; ~~and~~ All-season BMPs to reduce road and parking lot debris and other pollutants from entering the MS4. ~~(c)~~ Permittees shall implement all pollution prevention/good housekeeping practices established in the O&M Plan for all roads, highways, and parking lots with more than 5,000 square feet of pollutant generating impervious surface that are owned, operated, or maintained by the Permittee.	Modified	Operations & Maintenance	12/31/2022	The City's updated O&M Plan for the MS4 area will address parking lots, as needed. Roads will be covered in the updated UIC O&M Plan.	Stormwater Facilities O&M Plan_updated 2018 PDF document		No	N/A	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address parking lots (greater than 5,000 SF of PGIS) that are owned, operated, or maintained by the City.
S5.B.6.a.i.(c)	**Vehicle fleets.** The O&M Plan shall address, at a minimum: Storage, Washing, Maintenance, Repair, ~~and~~ Fueling of municipal vehicle fleets. ~~(d)~~ Permittees shall conduct all vehicle and equipment washing and maintenance in a self-contained covered building or in designated wash and/or maintenance areas operated to separate wash water from stormwater.	Existing	Operations & Maintenance	12/31/2022	There are no fleet vehicles within the MS4 area; therefore, this Permit requirement is not applicable to the City. For the UIC area, the City's snow plows are washed at a City of Spokane facility.	Stormwater Facilities O&M Plan_updated 2018 PDF document		No	N/A	N/A - There are no fleet vehicles within the MS4 area.
S5.B.6.a.i.(d)	**Municipal buildings.** The O&M Plan shall address, at a minimum: Cleaning, Washing, Painting. and Other maintenance activities. ~~(e)~~ Permittees shall implement all pollution prevention/good housekeeping practices established in the O&M Plan for buildings owned, operated, or maintained by the Permittee.	Existing	Operations & Maintenance	12/31/2022	There are no municipal buildings in the MS4 area; therefore this Permit requirement does not apply to the City.	Stormwater Facilities O&M Plan_updated 2018 PDF document		No	N/A	N/A - There are no municipal buildings in the MS4 area.
S5.B.6.a.i.(e)	**Parks and open space.** The O&M Plan shall address, at a minimum: Proper application of fertilizer, Pesticides, and herbicides; Pet waste BMPs; Sediment and erosion control; BMPs for landscape maintenance and vegetation disposal; Trash and dumpster management;. ~~and~~ BMPs for building exterior cleaning and maintenance. ~~(f)~~ Permittees shall implement park and open space maintenance pollution prevention/good housekeeping practices at all park areas and other open spaces owned or operated by the Permittee.	Existing	Operations & Maintenance	12/31/2022	City needs to complete modeling to determine final MS4 area. Once the area is finalized parks within the MS4 area will be analyzed and the O&M plan updated, as required.	Stormwater Facilities O&M Plan_updated 2018 PDF document		No	N/A	Update O&M Plan for MS4 area to appropriately address parks and open spaces after modeling of MS4 area has been completed and parks/open space within the MS4 area determined.
S5.B.6.a.i.(f)	**Construction Projects.** Public construction projects shall comply with the requirements applied to private projects. All construction projects owned or operated by the Permittee that are required to have an NPDES permit shall be covered under either the Construction Stormwater General ~~NPDES~~ Permit ~~for Stormwater Discharges Associated with Construction Activities~~ or another NPDES permit that authorizes stormwater discharges associated with the activity. All public projects shall include construction and post-construction controls selected and implemented pursuant to the requirements in Appendix 1.	Modified	Documentation	12/31/2022	Yes, construction projects owned or operated by the Permittee are required to have an NPDES permit covered under either the Construction Stormwater General Permit or another NPDES permit that authorizes stormwater discharges associated with the activity. All projects within the city are required to have construction phase and post-construction stormwater controls implemented pursuant to Appendix 1.	N/A		Yes	N/A	
S5.B.6.a.i.(g)	**Industrial Activities.** All facilities owned or operated by the Permittee that are required to have NPDES permit coverage shall be covered under the Industrial Stormwater General ~~NPDES~~ Permit ~~for Stormwater Discharges Associated with Industrial Activities~~ or another NPDES permit that authorizes stormwater discharges associated with the activity.	Modified	Documentation	12/31/2022	There are no industrial activities in the MS4 area; therefore this Permit requirement does not apply to the City.	N/A		Yes	N/A	N/A - There are no industrial activities in the MS4 area.
S5.B.6.a.i.(h)	**Material storage areas, heavy equipment storage areas, and maintenance areas.** Permittees shall implement a Stormwater Pollution Prevention Plan (SWPPP) to protect water quality at each of these facilities owned or operated by the Permittee and not required to have coverage under the ~~General NPDES Permit for~~ Industrial Stormwater ~~Discharges Associated with Industrial Activities~~General Permit or another NPDES permit that authorizes stormwater discharges associated with the activity. ~~Generic Stormwater Pollution Prevention Plans that can be applied at multiple sites may be used to comply with this requirement.~~At a minimum the SWPPP shall include:	Modified	Documentation	12/31/2022	There are no facilities owned or operated by the City that have material or heavy equipment storage areas or maintenance within the MS4 area; therefore this requirement does not apply to the City.	Centerplace Site Assessment Word document, SWMPP - Police Station Assessment Word document, SWMP documents for the Euclid Maintenance Yard	N/A		N/A	N/A - There are no facilities owned or operated by the City that have material or heavy equipment storage areas or maintenance within the MS4 area.
S5.B.6.a.i.(h)	A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure.	New	Documentation	12/31/2022	There are no areas within the MS4 area that require a SWPPP; therefore this requirement does not apply to the City.	SWMPP - Euclid Mnt Facility Map 2017 PDF document	N/A	Yes	N/A	N/A - There are no areas within the MS4 area that require a SWPPP.

S5.B.6.a.i.(h)	An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution.	New	Record Keeping	12/31/2022	There are no areas within the MS4 area that require a SWPPP; therefore this requirement does not apply to the City.	SWMPP - Euclid Mnt Facility PDF document	N/A	Yes	N/A	N/A - There are no areas within the MS4 area that require a SWPPP.
S5.B.6.a.i.(h)	A plan for preventing and responding to spills at the facility which could result in an illicit discharge.	New	Documentation	12/31/2022	There are no areas within the MS4 area that require a SWPPP; therefore this requirement does not apply to the City.	SWMPP - Euclid Mnt Facility Spill Plan	N/A	Yes	N/A	N/A - There are no areas within the MS4 area that require a SWPPP.
S5.B.6.a.i.(h)	A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs. BMPs selected shall be consistent with the Stormwater Management Manual for Eastern Washington, or a program approved by Ecology. The SWPPP shall be updated as needed to maintain relevancy with the facility.	New	Record Keeping	12/31/2022	There are no areas within the MS4 area that require a SWPPP; therefore this requirement does not apply to the City.	N/A	N/A	Yes	N/A	N/A - There are no areas within the MS4 area that require a SWPPP.
S5.B.6.a.i.(h)	Annual inspections of the facility, including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections shall be documented in an inspection report or check list.				There are no areas within the MS4 area that require a SWPPP; therefore this requirement does not apply to the City.	N/A	N/A		N/A	N/A - There are no areas within the MS4 area that require a SWPPP.
S5.B.6.a.i.(i)	**Flood management projects.** Permittees shall assess water quality impacts in the design of all new flood management projects that are associated with the MS4 or that discharge to the MS4, including considering use of controls that minimize impacts to site hydrology and still meet project objectives.	Existing	Data Management	12/31/2022	The City assesses water quality impacts in the design of all new flood management projects that are associated with the MS4 or that discharge to the MS4. Projects in the floodplain are reviewed and held to the same standards as any other project in the city.	N/A	John Johnson & Chad Phillips	No	N/A	N/A - There are no flood control projects within the City.
S5.B.6.a.i.(j)	**Other facilities that would reasonably be expected to discharge contaminated runoff.** Permittees shall implement BMPs to protect water quality from discharges from these sites in the O&M Plan.	Existing	Data Management	Immediately	BMPs implemented to protect water quality from discharges from other facilities that would reasonably be expected to discharge contaminated runoff will be addressed in updated MS4 O&M Plan.	N/A	John Johnson & Chad Phillips	No	None	Update MS4 O&M Plan to include BMPs implemented to protect water quality from discharges from other facilities that would reasonably be expected to discharge contaminated runoff.
S5.B.6.a.ii	The O&M plan shall include a schedule of inspections and requirements for record keeping pursuant to S9 Reporting and Recordkeeping.	Existing	Record Keeping	Immediately	No, the O&M Plan does not include a formal schedule of inspections and requirements for record keeping pursuant to S9 Reporting and Recordkeeping. The City has a standard plan that is implemented instead. The City plans to review existing standard plan and look for opportunities to increase efficiently and formalize a schedule.	Stormwater Facilities O&M Plan_updated 2018 PDF document	John Johnson & Chad Phillips	No	Partial	Update MS4 O&M Plan to include a schedule of inspections and requirements for record keeping pursuant to S9 Reporting and Recordkeeping.
S5.B.6.a.ii.(a)	A minimum of 95% of all known stormwater treatment and flow control facilities (except catch basins) owned, operated or maintained by the Permittee shall be inspected at least once every two years, with problem facilities identified during inspections to be inspected more frequently.	Existing	Record Keeping	Immediately	The City believes they do not have flow control facilities based on the definition in the EWA Manual. The drywells are considered more of a discharge point to reduce local flooding, not a structure installed to protect the stream. There are approximately 20 swales within the MS4 area and are inspected once every two years, but not recorded. There are also some cartridges. The cartridges have not been inspected since 2020.	N/A	John Johnson & Chad Phillips	Yes	Partial	Develop plan, including schedule and documentation process to inspect water quality and flow control facilities (swales & UICs) within the MS4 area once every two years.
S5.B.6.a.ii(b)	All catch basins and inlets owned or operated by the Permittee shall be inspected ~~at least once by December 31, 2018 and~~ every two years ~~thereafter~~. Clean catch basins if the inspection indicates cleaning is needed to comply with the maintenance standards adopted pursuant to S5.B.6.a.The following alternatives to the standard approach of inspecting catch basins ~~once by December 31, 2018 and~~ every two years ~~thereafter~~ may be applied to all or portions of the system:	Existing	Operations & Maintenance	Immediately	There are approximately 800 CBs in the MS4 area. The City inspects CBs as they perform maintenance. CBs along arterials are inspected/maintained once every two years (east/west one year, north/south the following year). CBs within the MS4 are not generally along arterials. All CBs are maintained within a four year period.	N/A	John Johnson & Chad Phillips	Yes	Partial	Develop plan, including schedule and documentation process to inspect catch basins within the MS4 once every two years, or other options available in Section S5.B.6.a.iib.1-3 of the Permit.
S5.B.6.a.ii(b)(1)	The catch basin inspection schedule of ~~once by December 31, 2018 and~~ every two years thereafter may be changed as appropriate to meet the maintenance standard based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experiences and shall be certified in accordance with G19 Certification and Signature.	Existing	Record Keeping	Immediately	The City will begin collecting inspection information and will evaluate this option when enough data has been collected.	N/A	John Johnson & Chad Phillips	Yes	N/A	Collect inspection data and evaluate when enough CB data has been collected.
S5.B.6.a.ii(b)(2)	Inspections ~~at least once by December 31, 2018 and~~ every two years thereafter may be conducted on a "circuit basis" whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include in the inspection the catch basin immediately upstream of any system outfall, ~~or~~ discharge point, or connections to public or private storm systems, if applicable. Clean all catch basins within a given circuit for which the inspection indicates cleaning is needed to comply with maintenance standards established under S5.B ~~.4.~~ 6.a, above.	Modified	Operations & Maintenance	Immediately	No, CBs are not inspected on a "circuit" basis, but this option can be evaluated for implementation.	N/A	John Johnson & Chad Phillips	Yes	N/A	Evaluate inspecting CBs on a "circuit basis" when developing inspection plan for CBs within the MS4.
S5.B.6.a.ii(b)(3)	The Permittee may clean all pipes, ditches, catch basins, and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.	Existing	Operations & Maintenance	Immediately	N/A	N/A	N/A	Yes	N/A	N/A

S5.B.6.a.ii(c)	Spot checks for potentially damaged stormwater treatment and flow control facilities ~~will~~ shall be conducted after major storm events (24 hour storm event with a 10-year or greater recurrence interval). Any needed repair or maintenance shall be performed as soon as practicable pursuant to the findings of a regular inspection or spot check.	Existing	Operations & Maintenance	Immediately	No, the City has not had the need to perform spot checks. There is no formal plan for spot checks after a major storm event. Damaged flow control or stormwater treatment facilities are found during routine inspections.	N/A	John Johnson & Chad Phillips	Yes	Partial	Develop a formal plan with procedures and documentation process for inspecting stormwater control facilities after a major storm event. Plan should include what triggers and inspection.
S5.B.6.a.iii	The O&M plan shall identify the department (and where appropriate, the specific staff) responsible for performing each activity.	Existing	Documentation	Immediately	The updated MS4 O&M Plan will include the department (and where appropriate, the specific staff) responsible for performing each activity.	N/A	John Johnson & Chad Phillips	No	None	Include department (and where appropriate, the specific staff) responsible for performing each activity in the updated MS4 O&M Plan.
S5.B.6.b	Permittees shall provide training for all employees who have primary construction, operations, or maintenance job functions that are likely to impact stormwater quality. Training shall address the importance of protecting water quality, operation and maintenance requirements, relevant SWPPPs, inspection procedures, and ways to perform their job activities to prevent or minimize impacts to water quality. Follow-up training shall be provided as needed to address changes in procedures, methods or staffing.	Modified	Training	Immediately	The City does not provide formal O&M training. Training is done peer to peer and is focused on what to look for when inspecting/maintaining drywells. Most inspection/maintenance is done through contracts.	Staff Training 2020 - signatures PDF document	John Johnson & Chad Phillips	Yes	Partial	Develop formal training with documentation process specific to O&M that includes the inspection/maintenance of each type of facility within the city.
S8 Monitoring and Assessment										
S8.A	Stormwater Management Program Effectiveness Studies. Each city and county Permittee listed in S1.D.2.a.i and S1.D.2.a.ii shall: ~~collaborate with other Permittees to select, propose, develop, and conduct~~;	Modified	Policy Development & Implementation	Immediately	N/A	N/A	N/A	No	N/A	N/A
S8.A.1	Continue to participate in implementation of the eight Ecology-approved studies ~~to assess, on a regional or sub-regional basis, effectiveness of permit-required stormwater management program activities and best management practices. Permittees shall~~ that were selected pursuant to section S8.B in the Eastern Washington Phase II Municipal Stormwater Permit (2014-2019).	Existing	Policy Development & Implementation	Immediately	Yes, the City has/is participating in the implementation of one (or more) of the eight Ecology-approved studies pursuant to section S8.B in the EWA Phase II Municipal Stormwater Permit (2014-2019). A list of the studies and roles is as follows: 1. Mobile Contractor E&O (Wenatchee) - Role as reviewer (completed in 2020) 2. Street Cleaning and Catch Basin Cleaning (Ellensburg) - Role as TAG member and reviewer (completed in 2020) 3. Bioretention Soil Media (Spokane County) - Role as TAG member and reviewer (completed in 2021) 4. Drain Rangers Elementary School Children Program (Kennewick) - Role as reviewer (to be completed in 2022)	2022 Stormwater Management Plan	Chad Phillips	Yes	Meets	
S8.A.1.a	Each Lead Entity shall implement the study according to the Ecology-approved Quality Assurance Project Plan (QAPP).	New	Policy Development & Implementation	Immediately	The City was not a lead entity for any studies.	N/A	N/A	Yes	N/A	
S8.A.2	Coordinate with other local governments in your designated Urban Area, to plan and begin an additional stormwater management program effectiveness study. Two or more Urban Areas may collaborate on a single study. The ten Urban Areas associated with this Permit are: Clarkston, Ellensburg, Moses Lake, Pullman, Spokane, Sunnyside, Tri-Cities (Quad Cities), Walla Walla, Wenatchee, and Yakima.	New	Policy Development & Implementation	prior to June 30, 2021	Yes, the City is partnering with the City of Spokane and Spokane County to plan and begin an additional stormwater management program effectiveness study during the 2019-2024 permit cycle? A non-vegetated bioretention soil mix will be studied for effectiveness of treatment and seasonal variability of treatment.	2022 Stormwater Management Plan	Chad Phillips	Yes	Meets	
S8.A.2.a	a. Every Permittee shall participate by one or more of the following options: i. Serve as the lead entity, ii. Contribute staff time or other in-kind services, iii. Provide funding.	New	Policy Development & Implementation	prior to June 30, 2021	For the 2019-2024 permit cycle, the City has contributed staff time or other in-kind services and provided funding.	2022 Stormwater Management Plan	Chad Phillips	Yes	Meets	
S8.A.2.b	Submit to Ecology a list of project participants and each participant's associated role(s) in the study on or before June 30, 2021.	New	Documentation	prior to June 30, 2021	Yes, the City submitted an Effectiveness Study Participation sheet that included a list of project participants and each participant's associated roles. This was submitted as part of the annual report.	51_Effectiveness Study Participation 2021 PDF document	Chad Phillips	Yes	Meets	
S8.A.2.c	Submit a detailed study design proposal to Ecology on or before September 30, 2022. i. Follow the format and instructions in the Eastern Washington QAPP template appropriate for the study type (operational, structural, or education and outreach). ii. If Ecology has not provided comments on the proposal within 90 days it is considered approved.	New	Documentation	9/30/2022	Yes, for the 2019-2024 permit cycle the City will submit a study design proposal for the Non-Vegetated Bioretention Soil Mix study to Ecology by September 2022. The proposal will follow the format and instructions in the EWA QAPP template appropriate for the study type.	2022 Stormwater Management Plan	Chad Phillips	Yes	N/A	Submit a study design proposal for the Non-Vegetated Bioretention Soil Mix study to Ecology by September 2022
S8.A.2.d	Submit a completed QAPP on or before July 31, 2023. i. Follow the format and instructions in the QAPP template appropriate for the study type (operational, structural, or education and outreach). ii. If Ecology has not provided comments on the QAPP within 90 days it is considered approved.	New	Documentation	7/31/2023		N/A	Chad Phillips	Yes	N/A	Submit a completed QAPP to Ecology by July 31, 2023.
S8.A.2.e	Begin to conduct the study on or before December 1, 2023.	New	Policy Development & Implementation	12/1/2023		N/A	Chad Phillips	Yes	N/A	Begin to conduct the study on or before December 1, 2023.
S8.A.2.f	Include effectiveness study activities (assigned duties; participation in meetings, proposal development, project reviews; and study implementation) in the Permittee's updated SWMP.	New	Documentation	when SWMP is completed	Yes, the City has outlined effectiveness study activities in the City's SWMP and will continue to do so.	2022 Stormwater Management Plan	Chad Phillips	Yes	Meets	Continue to include effectiveness study activities in updated SWMPs for the remainder of the permit cycle.
S8.B	1. Every Lead Entity shall follow reporting requirements and timelines in the approved QAPP for the study, including: a. Enter all applicable data collected as part of conducting the study into Ecology's Environmental Information Management (EIM) database ~~before the end of the water year in which it is collected, or within six months of collecting the sample, whichever is later.~~ Project data that are not appropriate for the EIm shall be submitted in the Annual Report. b. ~~All participating permittees shall report~~ Within 60 days of completing the study, publish a final report with the results of ~~each~~ the study and ~~recommend~~ recommended future actions based on the findings. ~~Reports~~ c. Within 90 days of completing the study, produce a fact sheet summarizing the findings and recommendations ~~shall be submitted to Ecology no later than six months after completion of the study and by~~ and share it with other ~~means~~ Permittees. The target audience for the fact sheet is stormwater managers and ~~timelines identified in the approved QAPPs~~ local government elected officials. 2. ~~Each~~ Every city and county Permittee listed in S1.D.2.a.i and S1.D.2.a.ii shall ~~provide, in each annual report, a description of the Permittee's~~ track assigned duties and record participation in ~~Eastern Washington Stormwater Management Program Effectiveness Studies planning efforts, and related outcomes~~ effectiveness study meetings, proposal development, project reviews, and study implementation, and include a summary in the Permittee's Annual Report.	Modified	Documentation	with annual report; 60 days (after final report published); 90 days (after project complete)	Yes, for 2019-2024 permit cycle, the City will follow reporting requirements and timelines in the approved QAPP for the study, including submitting the following in the annual report: project data, documentation of assigned duties and record participation in effectiveness study meetings, proposal development, project reviews, and study implementation. The City will submit the final publish report with the results of the study and recommended future actions based on the findings and a produce a fact sheet summarizing the findings and recommendations and share it with other permittees.	2021 Annual Report	Chad Phillips	No	Meets	Continue following reporting requirements and timelines in the approved QAPP for the study.
S9 Reporting and Record Keeping										
S9	No later than March 31 of each year beginning in ~~2016~~2020, each Permittee shall submit an annual report. The reporting period for the first annual report will be January 1, 201~~5~~9 through December 31, 201~~5~~9. The reporting period for all subsequent annual reports will be the previous calendar year unless otherwise specified. Permittees shall submit annual reports electronically using Ecology's ~~WQWebDMR~~ WQWebPortal program available on Ecology's website at ~~http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html~~ unless otherwise directed by Ecology. Permittees unable to submit electronically through Ecology's ~~WQWebDMR~~ WQWebPortal ~~must~~shall contact Ecology to request a waiver and obtain instructions on how to submit an annual report in an alternative format.	Existing	Documentation	March 31st of each year	Yes, an annual report is submitted to Ecology by March 31 of each year.	2021 Annual Report	Aaron Clary	No	Meets	
S9.A	Each Permittee is required to keep all records related to this permit for at least five years.	Existing	Record Keeping	Immediately	Yes, all records related to the NPDES MS4 permit are kept for at least five years.	N/A	Aaron Clary and Chad Phillips	No	Meets	

S9.B	Each Permittee shall make all records related to this permit and the Permittee's SWMP available to the public at reasonable times during business hours. The Permittee will provide a copy of the most recent annual report to any individual or entity, upon request. 1. A reasonable charge may be assessed by the Permittee for making photocopies of records. 2. The Permittee may require reasonable advance notice of intent to review records related to this Permit.	Existing	Record Keeping	March 31st of each year	Yes, all records related to the permit and the Permittee's SWMP are available to the public at reasonable times during business hours. The SWMP and Annual Report are available on the City's website. All other permit records are kept and available by request.	N/A	Aaron Clary	No	Meets	
S9.C.1	Include in the annual report: A copy of the Permittee's current Stormwater Management Program Plan (SWMP Plan) as required by S5.A.4.	Existing	Documentation	March 31st of each year	Yes, a copy of the current SWMP is included in the Annual Report.	2021 Annual Report and 2022 Stormwater Management Plan	Aaron Clary	Yes	Meets	
S9.C.2	Include in the annual report: Submittal of the annual report form as provided by Ecology pursuant to S9, describing the status of implementation of the requirements of this permit during the reporting period.	Existing	Documentation	March 31st of each year	Yes, status of implementation of requirements of the permit during this reporting period is included in Annual Report.	2021 Annual Report	Aaron Clary	Yes	Meets	
S9.C.3	Include in the annual report: Attachments to the annual report form including summaries, descriptions, reports, and other information as required, or as applicable to meet the conditions of this permit during the reporting period or as a required submittal. Refer to Appendix 3 for annual report questions.	Existing	Documentation	March 31st of each year	Yes, attachments are included in the Annual Report that provide summaries of the following: descriptions, reports, and other information as required, or as applicable to meet the conditions of this permit during the reporting period.	2021 Annual Report	Aaron Clary	Yes	Meets	
S9.C.4	Include in annual report: If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this permit.	Existing	Documentation	March 31st of each year	The annual report describes partnering efforts for effectiveness studies and E&O efforts, but the City does not have any formal agreement with these entities.	N/A	Aaron Clary	Yes	Meets	
S9.C.5	Include in annual report: Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C.	Existing	Documentation	March 31st of each year	Annual report includes certification and signature. All signatures and authorizations are set.	2021 Annual Report	Gloria Mantz	Yes	Meets	
S9.C.6	Include in the annual report: Permittees shall include with the annual report, notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period.	Existing	Documentation	March 31st of each year	N/A - No annexations, incorporations, or jurisdictional boundary changes.	2021 Annual Report	Aaron Clary	Yes	N/A	N/A - No annexations, incorporations, or jurisdictional boundary changes.
General										
G3.A	**Notification of Discharges Including Spills.** If a Permittee has knowledge of a discharge, including spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment, the Permittee shall: A. Take appropriate action to correct or minimize the threat to human health, welfare, and/or the environment.	Existing	Policy Development & Implementation	Immediately	Yes, if there is knowledge of a discharge or spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment, the City takes appropriate action to correct or minimize the threat. The threat would trigger contacting the fire department and Ecology.	2021 Annual Report	Aaron Clary	Yes	Meets	
G3.B	**Notification of Discharges Including Spills.** If a Permittee has knowledge of a discharge, including spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment, the Permittee shall: B. Notify the Ecology regional office and other appropriate spill response authorities immediately, but in no case later than within 24 hours of obtaining that knowledge. ~~The Ecology Central Regional Office 24-hour number is 509-575-2490, and for the Eastern Regional Office the 24-hour number is 509-329-3400.~~	Existing	Policy Development & Implementation	Immediately	Yes, the City informs the Ecology Regional Office and other appropriate spill response authorities within 24 hours if there is knowledge of a discharge or spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment. The City is not often the first to identify the situation, but contacts Ecology within 24 hours if they are notified.	2021 Annual Report	Aaron Clary	Yes	Meets	
G3.C	**Notification of Discharges Including Spills.** If a Permittee has knowledge of a discharge, including spills, into or from a MS4 which could constitute a threat to human health, welfare, or the environment, the Permittee shall: C. Immediately report spills or discharges of oils or hazardous substances to the Ecology regional office, and to the Washington Emergency Management Division at 1-800-258-5990.	Existing	Policy Development & Implementation	Immediately	Yes, per the 2021 the City immediately reports spills or discharges of oils or hazardous substances to the Ecology Regional office and the WA Emergency Management Division.	2021 Annual Report	Aaron Clary	No	Meets	
G19.B	**Certificate and Signature.** All formal submittals required by this permit shall be signed and certified by a principal executive officer or ranking elected official or by a duly authorized representative of that person. A person is a duly authorized representative only if: 1. The authorization is made in writing by a person described above and submitted to Ecology, and 2. The authorization specifies either an individual or a position having responsibility for the overall development and implementation of the stormwater management program. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)	Existing	Policy Development & Implementation	Immediately	Yes, a principal executive officer or ranking elected official or the duly authorized representative from the Permittee signs all forms required by this permit. All forms required by the permit are signed by Gloria Mantz. The City submitted a G20, but it is now resolved.	2021 Annual Report	Gloria Mantz	No	Meets	
G19.C	**Certificate and Signature.** Changes to authorization. If an authorization under General Condition G19.B.2 is no longer accurate because a different individual or position has responsibility for the overall development and implementation of the stormwater management program, a new authorization satisfying the requirements of General Condition G19.B.2 shall be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.	Existing	Policy Development & Implementation	prior to or with required reports, information, or applications	Yes, when changes to authorization are made the City defines a new authorization satisfying the requirements of G19.B.2 and submits required documentation to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative. The City submitted a G20 for this requirement and now has a process for this in the future.	N/A	Chad Phillips	No	Meets	
G19.D	**Certificate and Signature.** Any person signing a formal submittal under this permit shall make the following certification: "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that Qualified Personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for willful violations."	Existing	Policy Development & Implementation	when required reports, information, or applications are due	Yes, for each submittal the person signing a formal submittal makes a certification that each document was prepared under direction or supervision in accordance with a system designed to assure that Qualified Personnel properly gathered and evaluated the information submitted.	N/A	Gloria Mantz	No	Meets	
G20	**Non-Compliance Notification.** In the event it is unable to comply with any of the terms and conditions of this permit, the Permittee ~~must~~shall: A. Notify Ecology of the failure to comply with the permit terms and conditions in writing within 30 days of becoming aware that the non-compliance has occurred. The written notification ~~must~~shall include all of the following: 1. A description of the non-compliance, including dates. 2. Beginning and ending dates of the non-compliance, and if the non-compliance has not been corrected, the anticipated date of correction. 3. Steps taken or planned to reduce, eliminate, or prevent reoccurrence of the non-compliance. B. Take appropriate action to stop or correct the condition of non-compliance.	Existing	Policy Development & Implementation	30 days	The city has not notified Ecology when they are not able to comply with any of the terms and conditions of the permit because they believed they were compliant. All notifications of non-compliance were identified by Ecology and based on differences in interpreting the language. The City has been non-compliant for a few requirements because they do not have adequate resources. For these requirements the City waits until notified by Ecology and then addresses the non-compliance.	N/A	Chad Phillips	Yes	Partial	City to develop process to notify Ecology when the City is unable to comply with any of the terms and conditions of the permit. Notification should be in writing and submitted within 30 days of becoming aware that the non-compliance has occurred. Submittal of a G20 offers permittees a degree of protection, particularly from the risk of third-party lawsuits. G20s also provide Ecology feedback, especially in instances where they are receiving multiple notifications regarding the same issue from permittees. This may help indicate the permit language is unclear or the expectation is unrealistic.

APPENDIX F

UIC Rule Compliance Checklist

Manual Section & pg #	Complete Manual Description	Compliance Timeframe (immediate or	Summary of Activities Associated with Compliance	Description of Program Gap	Current Programs Compliance Coverage (none, partial, compliant, exceeds)	Description of Recommended Improvement
	Ecology Letter Dated June 23, 2021 frm Mary Shaleen-Hansen					
N/A	On June 23, 2021 Ecology sent an email to permittees about asking them to notify Ecology by 7/31/21 regarding their approach they plan to implement for UIC wells. The email also included instructions for developing a UIC SWMP as well as determining whether MS4 permit authorizes the discharge as described below. The UIC Program rule, chapter 173-218 WAC, is the regulatory authority for UIC wells in Washington. The UIC program rule applies to Class V wells that receive stormwater regardless of whether a UIC well is located in a jurisdiction covered under the MS4 Permits or not. The rule also applies regardless of whether the UIC well is municipally or privately owned. The MS4 Permits do not authorize stormwater discharges to groundwater through UIC wells. However, if the overflow or surface discharge from a UIC well drains to the MS4, then the MS4 Permit does authorize the discharge and the conditions of the MS4 Permit directly apply. No discharge or overflow to an MS4 means the UIC well is designed to manage: •In Western Washington, the entire runoff file from the Western Washington Hydrology Model. •In Eastern Washington, Ecology recommends using the larger of: the volume of runoff from a 100-year, 3-hour storm, or a 100-year, 72-hour storm.	No specified date to implement UIC SWMP however Ecology wanted to be notified by 7/31/2021 if permittees plan to develop a UIC SWMP	The City submitted a draft copy of the UIC SWMP in January 2021 before Ecology sent out the letter. They are currently conducting an large basin analysis to identify MS4 and UIC areas which should be complete by October 2022. The city is using the Type II event to run this analysis which is more conservative then the Ecology required method. The UIC SWMP includes some discussion about the planned modeling and evaluation with some supporting information regarding model assumptions is included in Appendix 2.	none	**Exceeds** Modeling efforts are not complete but the City's modeling plan appears to Exceed Ecologyrequirements.	Recommendations are specific to improving the UIC BASIN ANALYSIS AND DETERMINATION section of the UIC SWMP. • A map is included in the MS4 SWMP that identifies the MS4 and UIC areas, but no map was included in the UIC SWMP. Also, there are differences between the map legend and what is described in the UIC SWMP (page 8). Suggest adding the same map to both documents and use consistent terminology on the legend and in the write up for both SWMPs. • The city is using the Type II rainfall event for modeling which produces substantially more runoff flow and volume compared to the Type 1A and 3-hour short duration event Ecology requires. A couple of considerations: o Consider switching to the Ecology required storms which will likely reduce the MS4 areas. o Which ever storm is used, please clearly note the storm event in the UIC SWMP. If the Type II is used, explain that the results should be conservative compared to the results Ecology requires as such providing an additional fact of safety with your results. o Provide more details on the modeling work: the goal for modeling and an overview of the work complete, a summary of the methods and assumptions used to conduct the analysis, and the results. Also connect the write up to the supporting information provided in Appendix 2.
	UIC SWMP Section Titled "TREATMENT REQUIREMENTS - PRESUMPTIVE APPROACH"					
N/A	This section of the UIC Plan outlines the Treatment Requiremetns following the Presumptive Approach.	n/a	n/a	n/a	n/a	n/a
5.6.2	**Rule-Authorization or Permit**					
5-399-400	UIC wells must either be rule-authorized or covered by a state waste discharge permit to operate. If a UIC well is rule-authorized, an individual permit is not required. Rule-authorization can be rescinded if a UIC well no longer meets the non-endangerment standard, i.e., the discharge does not meet ground water quality standards. A UIC well may be rule-authorized when both of the following required actions are completed: - Submit a registration form to Ecology (unless the UIC well is on tribal land, then registration is through U.S. EPA, Region 10). - Protect ground water quality. The discharge from the UIC well must meet the non-endangerment standard.		Per the city's UIC SWMP, areas of the city which do not outfall or overflow to surface waters of the state are regulated under the UIC Program WAC 173-218 for both public and private projects. All UICs are either Rule Authorized or for high threat UICs (identified by the well assessment) will be retrofitted to meet the rule authorization. For areas of the city which have UICs where runoff will outfall or overflow to surface waters, these UICs will continue to be regulated by the MS4 permit. See Figure 1 of the UIC SWMP which outlines the process of the city follows to determine how UIC will be regulated. The SWMP also states that for sub-bains that outfall via pipe or sheet flow will continue to be authorized under the MS4 permit.	none	compliant	none
5.6.3	**Registration**					
5-400	Register UIC wells using Ecology's online registration process. See the following website for details: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Underground-injection-control-program/Register-UIC-wells-online. All UIC wells must be registered except: UIC wells at single-family homes (or duplexes) receivingonly residential roof runoff used to collect stormwater runoff from roof surfaces on an individualhome (or duplex) or for basement flooding control.	60 days prior to construction	The SWMP includes defines three different processes for registering UICs depending on if the project is private or public and who is doing the registering: private projects, public projects/consultant, and public projects/non-consultants. According to the UIC SWMP and the city, all new UICs owned or operated by the city are registered within 60 days of construction. However, UIC registration documents from consultants are often not correct as such the city has to double check and correct the information. To improve the process the city has updated their forms to improve clarity. The city's role is to confirm the form is filled out however they do not know if the forms are submitted. The city has requested that Ecology send them an automatic email when the form is submitted. None of the UICs on private property connect to the city's MS4 however they do have overflow to these UICs to the MS4.	The city does not have a way to confirm UIC well registrations are filled 60 days prior to construction.	Compliant for registrations forms completed by the City but only partially compliant for forms completed by consultants.	Since owners or operators are required to register new UIC wells, the city should develop a process for confirming registration forms completed by consultants are submitted 60 days before construction.
5-400	***New UIC Wells*** Ecology considers UIC wells constructed on or after February 3, 2006, to be new wells. The registration provides Ecology with information to determine if the new UIC well meets the conditions to be rule-authorized: - Applicants must submit the registration form 60 days prior to construction to allow for a full review of the application by Ecology and other interested stakeholders. - The UIC well must meet the non-endangerment standard, i.e., it complies with all of the siting, design, and treatment requirements through either the presumptive approach (5.6.8 The Presumptive Approach) or the demonstrative approach (5.6.9 The Demonstrative Approach).	60 days prior to construction	see above	same as above	same as above	see above
5-400	***Existing UIC Wells*** The UIC rule considers UIC wells constructed prior to February 3, 2006, as "existing." Existing wells used to manage stormwater runoff do not have to meet the new UIC well treatment requirements; however, registration is required if the UIC well is not already registered, and the owner must also complete a well assessment (5.6.5 Well Assessment) to determine if an existing UIC well is a high threat to ground water. See WAC 173 218 090(2) and Ecology's UIC web page at the following address: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Underground-injection-control-program/Register-UIC-wells-online	3 to 5 years from adoption of WAC 173-218. City's adoption date was 6/19/2008.	The city has documented the requirements for registering "existing" UIC wells in their UIC SWMP and from discussions with the city, to the best of their knowledge all existing UIC wells owned by the city are registered.	There is no program gap, but communication of compliance should be improved in the UIC SWMP.	compliant	none
none	**Mapping and Assest Management**					
	There are no requirements for mapping UICs in the SWMMEW. These requirements are in the S5.B.3 IDDE of the MS4 permit.	none	The City completed an inventory of stormwater UIC's in 2008, using a combination of GPS and GIS technologies. The inventory is updated annually with any changes to the system and adding information from new construction. Collected stormwater UIC structure data includes location, size, type, and any structural Best Management Practices (BMPs) that are helping to protect the UIC, for example, catchbasins or bio-infiltration retention areas or swales.	none	N/A	No improvement however once the City completes the UIC SWMP, they should maintain their GIS mapping of UICs for asset management purposes.
5.6.4	**Meeting the Non-Endangerment Standard**					
	According to WAC 173-218-080(3), UIC wells must be constructed, operated, and maintained in a manner that protects water quality.	none	N/A	N/A	N/A	N/A

Manual Section & pg #	Complete Manual Description	Compliance Timeframe (immediate or	Summary of Activities Associated with Compliance	Description of Program Gap	Current Programs Compliance Coverage (none, partial, compliant, exceeds)	Description of Recommended Improvement
	New UIC Wells Ecology determines if a new UIC well is either rule-authorized or needs a state waste discharge permit based on whether the UIC well meets the non-endangerment standard. Designers may use either the presumptive or the demonstrative approach described in 5.6.8 The Presumptive Approach and 5.6.9 The Demonstrative Approach to meet the non-endangerment standard. UIC wells installed according to the specifications throughout 5.6 Subsurface Infiltration (Underground Injection Control Wells) are not considered a high threat to ground water.	none specified	Per page 10 of the UIC SWMP, the demonstrative approach is not recommended by the City. The City's UIC SWMP uses the presumptive approach as the standard method to meet the non-endangerment standard and rule-authorization. The City goes beyond requirements when WQ requirements are triggered.	none	compliant	none
	Existing UIC Wells To determine compliance with the UIC rule, owners of existing UIC wells must complete a well assessment to determine if an existing UIC well is a high threat to ground water (5.6.5 Well Assessment). The owner of a UIC well that is a high threat to ground water must retrofit the well to protect ground water quality.	none specified	The City knows which UICs were installed before 2006 and the 5.6.5 well assessment has been completed for all existing wells.	none	compliant	none
	Requirements for Municipal UIC Wells The UIC program rule is the regulatory authority for UIC wells in Washington. The UIC program rule applies to Class V wells that receive stormwater regardless of whether a UIC well is located in a municipality permitted under the Phase II NPDES Permit for Eastern Washington (MS4 Permit). The MS4 Permit does not authorize stormwater discharges to/from UIC wells unless the overflow or discharge from a UIC well drains to a NPDES municipal separate storm sewer system (MS4). In those cases, the MS4 Permit does authorize the discharge and the conditions of the MS4 Permit directly apply. For example, if a UIC well is designed to infiltrate the 10-year storm and route larger storms to the MS4, then the requirements of the MS4 Permit apply to the well. To prevent redundancy between the NPDES and the UIC programs, the UIC program rule allows permitted MS4s that also own or operate Class V UIC wells to satisfy the UIC rule by the presumptive approach (5.6.8 The Presumptive Approach). MS4 permittees have the option of applying the Stormwater Management Programs (SWMPs) that comply with the MS4 Permit to the areas served by their municipal UIC wells pursuant to WAC 173-218-090 (1)(c)(C) in the manner described below. Municipalities not covered by the MS4 Permit may follow a similar approach. Note that the MS4 Permit does not require jurisdictions to fulfill all the requirements of the UIC program. Municipalities may fulfill the source control and operation and maintenance requirements for new and existing municipal UIC wells under the following conditions:	none specified	covered in row 4	none	covered in row 4	covered in row 4 and other rows in this section
	All areas served by municipally owned and operated UIC wells must be included in a SWMP that ensures appropriate siting, treatment, design, operation, and maintenance of new municipal UIC wells as well as source control activities (including targeted E&O) that are well-suited for the land uses in these areas.	none specified	covered in other sections of this document.	none	covered in other sections of this document	covered in other sections of this document
	MS4 permittees may have a combined SWMP that addresses UIC and NPDES permit requirements together, or they may have two separate SWMPs for the areas served respectively by their municipal UIC wells and by their MS4.In areas not covered by the MS4 permit, municipalities may create a SWMP specifically for the areas served by municipal UIC		The City is in the process of developing two separate SWMPs for the areas served respectively by their municipal UIC wells and by their MS4. The city is conducting hydraulic modeling to identify areas where UICs could over flow (100 year event) to the MS4 and include an additional buffer area (next to a discharge area and the buffer drains to within the buffer basins). Per the G20 letter from the City to Ecology dated June 30, 2022, the City plans to complete the modeling by 10/1/2022 and submit the UIC SWMP to Ecology.	none	compliant	complete the separate SWMP as planned.
	To comply with the UIC rule, jurisdictions must implement all of the following activities and include them in their SWMP:	none specified	covered in rows 21-26	covered in rows 21-27	covered in rows 21-28	covered in rows 21-30
	Register all UIC wells, including existing and new wells.		see 5.6.3	see 5.6.3	see 5.6.3	see 5.6.3
	Design, construct, operate, and maintain new UIC wells according to the specifications throughout 5.6 Subsurface Infiltration (Underground Injection Control Wells).		described in UIC SWMP section Design Requirements and "New" UIC Stormwater Management Plan (SWMP)	covered in 5.6.10 & 5.6.11	covered in 5.6.10 & 5.6.11	covered in 5.6.10 & 5.6.11
	Operate and maintain existing wells according to the specifications throughout 5.6 Subsurface Infiltration (Underground Injection Control Wells).		refers to MS4 for O&M and TBD new program coming soon. More details about this are covered in 5.6.11.	covered in 5.6.11	covered in 5.6.11	covered in 5.6.11
	Municipalities choosing not to develop and implement a SWMP in areas served by existing Class V UIC wells must:	N/A	N/A	N/A	N/A	N/A
	Conduct a well assessment (5.6.5 Well Assessment) for each existing UIC well, and	N/A	N/A	N/A	N/A	N/A
	Create a Stormwater Site Plan (SSP) for the area served by each existing municipal UIC well. The SSP will include source control best management practices applicable to the activities present in the area and describe operation and maintenance procedures to keep the UIC well functioning properly to provide necessary treatment to protect groundwater.	N/A	N/A	N/A	N/A	N/A
	All new municipal UIC wells must be sited, designed, constructed, managed, operated, and maintained according to the requirements throughout 5.6 Subsurface Infiltration (Underground Injection Control Wells).	covered in other sections of this document	covered in other sections of this document	covered in other sections of this document	covered in other sections of this document	covered in other sections of this document
5.6.5	**Well Assessment**					
	The assessment of an existing UIC well evaluates the potential risks to ground water from the use of the well and includes information such as: - The land use and activities around the well (which affect the quality of the discharge), - The local geology, - Depth of the ground water table in relation to the UIC well, and - Whether the UIC well is located in a ground water protection area.		The assessment protocol includes land uses and activities around the well and whether the UIC is in a ground water protection area. The protocol also applies information in 5.6.16. The following was not used as part of the assessment criteria: information about underlying soils, depth to groundwater, and UIC structural or hydraulic deficiencies. These were excluded because based on the local conditions this information poses a relatively similar or no threat to groundwater throughout the City. The UIC SWMP provides detailed justification for excluding these items. starting on page 36.	recommendations for improvement are included but none are suggested to fill a gap.	Compliant	UIC assessment from UIC SWMP "*if the existing UIC conforms to current standards as outlined in the SRSM, the UIC received no assessment* ". Consider rephrasing to "....the UIC is classified as Meets Standards" for consistency with the well assment. Consder adding the following items to the retrofit program as part of a pro-active approach: •Correct problem areas (i.e., flood prone areas) as well as areas with known system capacity issues or operational deficiencies •Areas that could benefit from transitioning small decentralized UIC roadside systems with small capture areas (i.e., individual catch basin to drywell) into larger regional facilities that capture and treat large areas thereby realized the economy of scale benefits for facilities designed with centralized operations and maintenance in mind, reduced traffic interruptions during maintenance, and provide additional safeguards to reduce vehicle spill risk in high crash prone areas

Manual Section & pg #	Complete Manual Description	Compliance Timeframe (immediate or	Summary of Activities Associated with Compliance	Description of Program Gap	Current Programs Compliance Coverage (none, partial, compliant, exceeds)	Description of Recommended Improvement
	Use this information to assess whether the well is a high threat to ground water quality, by applying the information in 5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity. If an existing UIC well is located in a ground water protection area and the assessment determines that sufficient best management practices are not provided under the current conditions, retrofitting is required to protect ground water quality. Existing UIC wells in ground water protection areas that receive prohibited discharges (5.6.12 Prohibitions) must either be decommissioned or the activities must be moved and separated from the areas served by the existing UIC well. A UIC well that was in use prior to the project is considered an existing well only if it remains in place. The well may be retrofitted or reconstructed in place without being considered a new well. Otherwise, if an existing well is moved, it is considered a new well, and the UIC requirements pertaining to new UIC wells apply.	none specified	Based on the UIC SWMP, 5.6.16 Determining Treatment Requirements was considered but 5.6.17 Classification of Vadose Zone Treatment was not considered for the reasons stated above. The UIC assessment did not include points for the following items (part of 5.6.16) Other land uses with similar traffic/use characteristics (e.g., commercial buildings with a frequent turnover of visitors, such as grocery stores, shopping malls, restaurants, drive-through services, etc.) because the City excluded items that did not apply to them from Section 5.6.16. For example they do not have UICs on private property that they own or operate. The city plans to update the assessment every year. The updates are based on any new requirements or changes in the watershed.	recommendations for improvement are included but none are suggested to fill a gap.	Compliant	Clearly state all assumptions with the city developed well assessment. This will help clarify some of the assumptions the city has made to simplify the process. Consider a table to summarize this information instead of writing it out in paragraphs. Consider including source control in the scoring similar to BMPs since it is listed as on option in Table 5.23, this might reduce the numbers UICs that are a high threat without retrofitting. Consider if more of the siting requirements should be included in the criteria? For example minimum distances? Do a word search in the UIC SWMP and replace all instances of "*water quality standard*" with "*water quality treatment standard*". Water quality standards apply to conditions in receiving waters where as water quality treatment standards apply to level of water quality treatment required for stormwater runoff.
5-403	**Evaluating High Threat to Ground Water** For existing UIC wells, Ecology considers any of the following a high threat to ground water for which the UIC well must be retrofitted. - Existing UIC wells receiving prohibited discharges (5.6.12 Prohibitions); these wells also require a separate groundwater discharge permit. - Existing UIC wells receiving a high pollutant load where the vadose zone between the bottom of the UIC well and the top of the ground water has no treatment capacity or the vadose zone conditions are unknown; retrofits must provide treatment prior to the discharge to the well. - Existing UIC well structures completed below the ground water table; retrofits must provide separation and, if needed (5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity), treatment. (If a UIC well has standing water when it has not received recent stormwater inflows, it is likely completed below the groundwater table. See WAC 173-218-090(1)(b) for separation requirements between the bottom ofthe UIC well and the top of the ground water table.) - Site-specific information indicates that a ground water quality problem exists in the vicinity of the existing UIC well. A UIC well retrofit means to reduce the pollutant load from a UIC well to meet the nonendangermentstandard by applying source control activity and/or structural controls such as a treatment BMP or create separation between the base of the well and the top of the groundwater table, WAC 173-218-030.	none specified	UICs with a high threat to WQ have been identified using the well assessment. The determination does not include prohibited discharges or site specific conditions indicate a ground water problem. The city does not have this level of data available. A retrofit plan was developed in 2016 and is included in the UIC SWMP on pages 43-45. The plan includes a strategy to reduce pollutant loading from UICs by applying source control and/or source controls. Separation of ground water is not needed as previously described. Ask Chad to walk us through the retrofit strategy using Figure 6.			
5.6.6	**Preservation and Maintenance Projects**					
	A preservation or maintenance project is defined as preserving/protecting infrastructure by rehabilitating or replacing existing structures to maintain operational and structural integrity, and for the safe and efficient operation of the UIC well. Maintenance projects do not increase the traffic capacity of a roadway or parking area. A UIC well that was in use prior to a preservation or maintenance project is considered an existing well only if it remains in place. The well may be retrofitted or reconstructed in place without being considered a new well. Otherwise, if an existing UIC well is moved, it is considered a new well andthe UIC requirements apply pertaining to new UIC wells apply.	none specified	UIC wells on preservation and maintenance projects are not addressed in the UIC SWMP.	preservation and maintenance projects are not mentioned in the UIC SWMP.	none	discuss how the city addresses preservation and maintenance projects in the UIC SWMP.
5.6.7	**Emergency Situations**					
	In emergency situations, such as roadway flooding, a jurisdiction may install a UIC well that does not meet the requirements in this manual on a temporary basis. When weather permits, and within a year of the event, the jurisdiction must either fully decommission the well or ensure that the UIC well meets the requirements of the rule. For example, excessive winter rainfall overwhelms the capacity of the existing drainage system along a road. The water drains onto the road and turns to ice. The jurisdiction installs a new UIC well to fix the immediate problem and, once the weather permits, implements the required runoff treatment BMPs.		There is no mention of temporary UICs or whether the city uses this in the UIC SWMP. The city is not aware of ever doing this. Potentially on the private side.	emergency situations are not mentioned in the UIC SWMP.	none	discuss if the city will allow UICs to be used for emergency situations in the UIC SWMP and if so indicate the city will follow the SWMMEW Section 5.6.7.
5.6.8	**The Presumptive Approach**					
	New UIC wells that meet all of the requirements detailed throughout 5.6 Subsurface Infiltration UIC Wells meet the presumptive approach to comply with the non-endangerment standard. Otherwise, the demonstrative approach (5.6.9) is required. The presumptive approach requires the implementation of BMPs in Chapter 5 - Runoff Treatment BMP Design, Chapter 6 - Flow Control BMP Design, and/or Chapter 8 - Source Control of this manual or an equivalent manual, adopted at the time of construction. The manual addresses the following issues: - The potential pollutant loading expected in the stormwater runoff for the planned land use(s)(5.6.17 Classification of Vadose Zone Treatment Capacity) - Source control of pollutants, especially those that are difficult to remove from stormwater byfiltration, settlement, or other treatment technologies (see Chp 8 - Source Control) - Known treatment methods (see other sections of Chapter 5 - Runoff Treatment BMP Design) - The potential treatment capacity of the vadose zone (5.6.16 Determining Treatment Requirements) - Siting (see the Site Suitability Criteria [SSC] in 5.4.3 General Criteria for Infiltration and Bioinfiltration BMPs) - Design (5.6.10 Siting and Design of New UIC Wells or 6.3.6 BMPs for Infiltration) - O&M (App 6-A: Recommended Maintenance Criteria for Flow Control BMPs) 5.6.10 Siting and Design of New UIC Wells details the siting and design criteria to meet the presumptive approach for drywells designed to meet runoff treatment. 6.3.6 BMPs for Infiltration details the design requirements for infiltration trenches and drywells. The presumptive approach may not be used when none of the source control or treatment BMPs inthe manual are expected to eliminate or reduce concentrations of the pollutant(s) of concern (WAC 173-218-090(1)(i)(D)) to meet the nonendangerment standard.		Per the UIC SWMP: All new UIC wells, public or private, within the City's jurisdiction are required to either meet water quality treatment standards or to meet the presumptive approach requirements. The standard of treatment required is based on project type and whether Basic Requirement No. 3 Water Quality Treatment, section 2.1 of the SRSM, is triggered. See figure 2 shown above. The SWMP includes requirements for runoff treatment BMPs in the SRSM or SWMMEW including following the design guidance in these manuals. *There is no mention of flow control BMPs or Source Control in this section of the document to address the presumptive approach.*	flow control and source control BMPs are not mentioned in relation to the presumptive approach		add discussion regarding how flow control and source control BMPs are used to meet the presumptive approach
5.6.9	**The Demonstrative Approach**					
	Not included because the city does not recommend this approach.		Per the UIC SWMP, the city does not recommend this approach.	recommendations for improvement are included but none are suggested to fill a gap.	compliant	The UIC SWMP should state if this option will be allowed and under what condtions. Then indicate that the demonstrative approach as defined in the SWMMEW 5.6.9 would be followed.
5.6.10	**Siting and Design of New UIC Wells**					

Manual Section & pg #	Complete Manual Description	Compliance Timeframe (immediate or	Summary of Activities Associated with Compliance	Description of Program Gap	Current Programs Compliance Coverage (none, partial, compliant, exceeds)	Description of Recommended Improvement
	The requirements in this section apply to UIC wells built on or after 2/3/2006. **Minimum Siting Requirementsfor Rule-Authorizationof New UIC Wells** The following Site Suitability Criteria (SSC) from 5.4.3 General Criteria for Infiltration and Bioinfilt-ration BMPs apply to all UIC wells: - SSC-1: Setback Criteria - SSC-2: Ground Water Protection Areas - SSC-3: High Vehicle Traffic Areas - SSC-5: Depth to Bedrock, Ground Water Table, or Impermeable Layer - SSC-7: Seepage Analysis and Control - SSC-8: Cold Climate and Impact of Roadway Deicing Chemicals - SSC-9: Previously Contaminated Soils or Unstable Soils UIC wells may be used to provide flow control for stormwater runoff where pollutant concentrationsthat reach ground water will meet the Washington State ground water quality standards in thefollowing situations: - For flows greater than the water quality design storm (see Chapter 4 - Hydrologic Analysisand Design); or - Where stormwater is treated prior to discharge into the UIC well according to therequirements in 5.6.16 Determining Treatment Requirements. Furthermore, If SSC-4: Soil Infiltration Rate/Drawdown Time and SSC-6: Soil Physical andChemical Suitability for Treatment are met, the site is considered to have a high treatment capacity,and the existing site soils may be used to provide runoff treatment for flows through the UIC well(see 5.6.13 Source Control and Runoff Treatment Requirements).		~~For New UIC wells, the following siting restrictions per the Stormwater Management Manual for Eastern Washington apply to meet the non-endangerment standard under the presumptive approach:~~ Per the UIC SWMP the city follows the siting requirements and customized them to address unique conditions in the Valley. When the WQ requirement is triggered, they follow the SRSM. For projects that do not trigger those requirements, then there are projects that are exempt or generally exempt. Within that frame work they may need to add a UIC. For that case, they follow the SWMMEW using the presumptive approach.	none	compliant	In the UIC SWMP, Siting Requirements section. There are references in this section that are not clear to the reader. For example, the references to Appendix 3 is not clear why the city is monitoring contaminant levels or how the levels relate to drinking water standards. If this information is in another section of the UIC SWMP, just reference that section instead of the appendix. Also there is reference to "Existing UIC Stormwater Pollution Plan" in this section but there is no section in the document with this title.
	Restrictions on Siting UIC Wells - Prohibited areas: A UIC well may not be sited in prohibited areas; see 5.6.12 Prohibitions for the list of areas where stormwater discharges to UIC wells are prohibited. - Soil contamination: UIC wells may not be sited where there are soil contaminants that could be transported to ground water unless the site is remediated prior to construction.		The UIC SWMP does not include any discussion regarding restricting siting UIC wells in prohibited areas or areas with contaminated soils.	missing reference to restrictions on siting UIC wells however its implied in the Siting requirements		In the UIC SWMP add explicit language regarding restricting siting UIC wells in prohibited areas or areas with contaminated soils.
	Siting UIC Wells Near Drinking Water Wells Because a UIC well could be a potential source of contamination, it must be sited ≥ 100 feet from a drinking water well, outside of the sanitary control area of a public drinking water system, and ≥ 200 feet from a spring used for drinking water supplies. The design must consider the distance between the UIC well and a drinking water well based on the direction and rate of ground water flow, and the vulnerability of the drinking water supply well to potential contamination, which is influenced by the following factors: - Depth/distance from the bottom of the UIC well to the drinking water well screened interval(s), and - Presence or lack of confining layer(s) between the bottom of the UIC well and the aquifer interval(s) used as the water supply, and - Characteristics of the geologic material between the bottom of the UIC well and the aquifer.		Siting UIC wells near drinking water wells is addressed in the UIC SWMP.	none		none
	Ground Water Protection Areas At a minimum, basic treatment to remove solids prior to discharge to the UIC well is required for UIC wells located: - In a wellhead protection area where the drinking water well is categorized with a high-suscept-ibility rating by the Washington State Department of Health, and/or - Where a confining layer is not present between the base of the UIC well and the top of theaquifer used as a drinking water source, except when a UIC well receives insignificant and orlow pollutant load from stormwater (see Table 5.22: Pollutant Loading Classifications forSolids, Metals, and Oil in Stormwater Runoff Directed to UIC Wells). Local jurisdictions may have ordinances that apply to development within ground water protectionareas, such as sole source aquifers, ground water management areas, wellhead protection areas,and areas designated as Critical Aquifer Recharge Areas. To locate the wellhead areas and theassociated water districts in each county, see the Washington State Department of Health (DOH)Source Water Assessment Program maps at the following web address:https://fortress.wa.gov/doh/swap/Consult with the local jurisdiction for information on ground water protection areas.		Provided on page 24 of the UIC SWMP and in Table 5 of the document.	none		none
	Designand Construction Requirements for Rule-Authorizationof New UIC Wells In order to be rule-authorized under the presumptive approach, UIC wells must be designed and installed in accordance with this manual or an equivalent manual adopted at the time of construction. The following subsections include additional requirements for design and construction of UIC wells.		New UICs require the implementation of the following design requirements: • Water Quality (Preferred Method) Treatment BMP Design • Runoff Treatment (Standard Method) BMP Design • BMP Selection – Preferred vs Standard Method • Flow Control BMP Design The City of Spokane Valley has identified two allowable methods to meet these requirements. The preferred method (water quality) is to implement design procedures and BMPs as defined in the Spokane Region Stormwater Manual. The implementation of these procedures and BMPs will most often meet the higher standard of water quality treatment. The standard method (presumptive approach) is to implement design procedures and *BMPs as defined in the 2019 Stormwater Management Manual for Eastern Washington.*	none		none
	Prevention of Clogging During Construction In order to prevent clogging, UIC wells must be protected from sediment in runoff generated during construction. See Chapter 7 - Construction Stormwater Pollution Prevention for construction BMPs to prevent other pollutants from entering the UIC well during the construction phase of a project.		The city applies Basic Requirement No. 6 – Erosion and Sediment Control (SRSM chapter 2.1.5) when triggered for all public and private projects proposing UICs. All UICs will be protected throught the Erosion and Sediment control plan.	none		none
	Stormwater Infiltration Rate/Drawdown Time In most cases, UIC wells are designed to completely drain ponded runoff within 48 to 72 hours after flow to the UIC well has stopped. If the UIC well is designed to meet a runoff treatment requirement, the long-term infiltration rate (see 6.3.3 General Criteria for Infiltration BMPs) must be sufficient to accommodate the water quality design storm (see Chapter 4 - Hydrologic Analysis and Design).		No reference to infiltrate rate or draw down time	missing reference to long term infiltration rate.		The UIC SWMP does not list an infiltratio rate or drawdown time for UICs. There is reference to the SRSM which does list the 72 hour drawdown time but the SRSM does not mention the long term infiltration rate. Consider adding this to the UIC SWMP.

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	Vertical Separation for Rule-Authorization Using the Presumptive Approach WAC 173-218-090 requires that new Class V UIC wells used for stormwater management must not directly discharge into ground water. A 5-foot separation between the bottom of the well and the top of the ground water is required, unless a demonstrative approach confirms that a separation of 3 feet will meet the non-endangerment standard. The required depth to ground water/vertical separation between the base of the UIC well and the top of the ground water table for rule-authorization using the presumptive approach depends on the treatment capacity of the unsaturated zone. 5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity provide a method for determining the treatment requirements based on the treatment capacity of the vadose zone and the pollutant loading classification of the stormwater runoff directed to the UIC wells. The minimum vertical separation is 5 feet between the base of a UIC well and the highest elevation between the seasonal high ground water table, bedrock, hardpan, or other low-permeability layer.		The city has determined that the depth is atleast 25 feet for all drywells.	none		none
	Vertical Separation When 5-Foot Minimum Separation Cannot Be Met If the vertical separation required for the presumptive approach cannot be met: - Rule-authorization can be obtained using the demonstrative approach (see 5.6.9 The Demonstrative Approach), or - A reduction in separation to as little as 3 feet can be considered under the presumptive approach provided: o The treatment requirements are otherwise met (see 5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity), and: o The ground water mounding analysis, the volumetric water holding capacity of the zone receiving the water, and the design of the overflow and/or bypass structures are judged by the design professional as adequate to prevent overtopping and meet the SSC specified in this section.		not applicable to the city because the minimum separation is 25 ft	none		none
5.6.11	**Operation and Maintenance of UIC Wells**					
	The UIC rule requires that wells are operated and maintained to protect ground water quality. Maintenance of UIC wells prevents clogging and contamination from materials that collect in the well over time. The following required preventive maintenance activities will help maintain UIC function: - Treatment for solids removal or a catch basin with a down-turned elbow upstream of discharge to the UIC well to promote the long-term infiltration capacity and reduce the need for maintaining the UIC wells, as well as reduce the long-term accumulation of contaminants in the vadose zone - Frequent inspections and regular maintenance to improve the long-term performance of UIC wells - Periodic removal of debris and sediment from the drywell to reduce or eliminate the buildup of materials that could inhibit infiltration - Checking for structural damage and repair as needed See Appendix 6-A: Recommended Maintenance Criteria for Flow Control BMPs for recommended maintenance criteria and inspection frequencies.			Based on what is written in Section 5.4 of the SWMMEW and discussions with the city regarding their current maintenance practices, it appears the city is compliant. Recommendations and considerations for developing the UIC O&M Plan are noted.	compliant	When developing the UIC O&M Plan, some suggestions include: •The plan should discuss treatment of solids removal or use of a down turn elbow in u/s of discharge to UIC to reduce need for maintenance. •Indicate the frequency and schedule for inspecting and cleaning UICs.Currently the UIC Rule references the maintenance criteria in the SWMMEW (Section 6.A.6) which are listed as recommendations not requirements. It is possible that Ecology could provide requirements for UIC maintenance in the future. In preparation for that use inspection records or observations regarding sediment accumulation and/or observed flooding to recommend maintenance frequency to justify your maitenance frequency. •The O&M plan should include a plan schedule and frequency for providing maintenance of catch basins, BMPs, culverts, and storm drains that are in the UIC areas. •Develop a standard template for inspections that is used to at a minimum is used to document problems identified and when they were identified. The template should include the items outlined in Section 6A of the SWMMEW for drywells. •Consider how frequency of street sweeping might impact UIC cleaning: more frequent sweeping could reduce the frequency of cleaning UICs. •Consider adding an integrated pest management to reduce application risk of fertilizers, pesticides, and herbicides commingling with stormwater runoff conveyed to UIC facilities •Include culvert and ditch maintenance in the O&M plan
5.6.12	**Prohibitions**					
	UIC wells may not receive SW from the activities and conditions listed below: - Vehicle maintenance, repair, and service - Commercial or fleet vehicle washing - Airport/airplane deicing - Storage of treated lumber - Storage or handling of hazardous materials - Generation, storage, transfer, treatment, or disposal of hazardous wastes - Handling of radioactive materials - Solid waste handling facilities, including compost and biosolid facilities, except for those that recycle only glass, paper, plastic, or cardboard - Concrete recycling facilities that generate, store, or handle crushed concrete - Asphalt recycling facilities that generate, store, or handle crushed asphalt - Industrial or commercial areas that have outdoor processing, handling, or storage of raw solid materials or finished products unless the facility has specific management plans for proper storage and spill prevention, control, and containment appropriate to the types of materials handled at the facility (see Chp 8 - Source Control for information on SWPPPs and source control) - Contaminated sites when the stormwater would increase the mobility of the contaminants at the site. For example, a drywell could not be used upgradient of or over the contaminant plume at a leaking underground storage tank site. The stormwater could increase the movement of the contaminants. - Process water from the production area of an animal feeding operation. -Land use, activity, or infiltration determined to be a significant contributor of pollutants to waters of the State or a site release of hazardous substances from historical or current activities resulting in contamination of soil, ground water, surface water, if the ground water is in direct communication with surface water, or sediment, which is prohibited under the Model Toxics Control Act (Chp 173-340 WAC) & Sediment Management Standards (Chp 173-204 WAC).		The UIC SWMP does not mentioned prohibitions. Also there does not appear to be any mention of prohibitions related to UICs in the City's ordinances.	Prohibitions and how the city prevents them from entering UICs should be discussed in the UIC SWMP.	partial	Add discuss to the UIC SWMP regarding how the city prevents prohibitions from entering UICs. This may included refererences to ordinances that address illicit discharge. If an existing drywell receives prohibited discharges they require a separate groundwater discharge permit. Since the city is splitting up the UIC and MS4 areas, consder adding more explicit language to the ordinances related to prohibited discharges to UICs.
	Because of the potential to contaminate ground water, a UIC well must be individually authorized under a waste discharge permit to receive stormwater from any areas subject to the activities listed above. Ecology does not consider conventional runoff treatment to be protective of ground water in these situations. Stormwater from areas subject to the activities listed above must be handled on-site with a closed-loop system or discharged to the sanitary sewer, if allowed by the local jurisdiction. However, careful design of these project sites may allow UIC wells to handle some of thestormwater runoff that will be generated. Stormwater from any portions of the site or facility that donot come in contact with these activities (or the areas of the facility associated with these activities) are allowed to be discharged to a UIC well following the presumptive approach. See WAC 173-218-040(5)(b) for a list of examples of other prohibited UIC wells.		addressed in above	addressed in above	addressed in above	addressed in above

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5.6.13	**Source Control and Runoff Treatment Requirements**					
	The UIC rule bases source control and runoff treatment requirements on the types and quantities of pollutants expected from the proposed land use contributing storm runoff to the UIC well. The rule presumes a UIC well meets the non-endangerment standard and is rule-authorized if the designer follows the guidelines in this section based on the following: - Application of source control BMPs to control loading of pollutants that are difficult to remove from stormwater by filtration, settlement, or other treatment technologies, and - Appropriate treatment of runoff to remove pollutants, which may be achieved by either or both: o Application of treatment to remove pollutants before discharging stormwater into the UIC well o Availability of appropriate vadose zone treatment capacity to remove the solid phase of pollutants in stormwater by filtration and adsorption (see 5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity)		Per the UIC SWMP Section SOURCE CONTROL "The above sections of this plan details how "New UIC" wells meet the non-endangerment standard and are rule authorized by implementing the standard or preferred method of treatment and the associated BMPS. The implementation of these methods helps meet the non-endangerment standard for the following reasons: • Application of source control measures to control loading of pollutants that are difficult to remove from stormwater by filtration, settlement, or other treatment technologies. • Application of pre-treatment to remove pollutants before stormwater discharged into the UIC well. • Availability of appropriate vadose zone treatment capacity to remove the solid phase of pollutants in stormwater by filtration and adsorption. This chapter of the plan identifies additional source control BMPs that are implemented to enhance the removal and/or minimize the level of pollutants storm runoff directs to the "New UIC". Source control discussed in this chapter includes the following: • Control loading of pollutants that are difficult to remove from stormwater by filtration, settlement, or other treatment technologies. • Protect pollutant loading from construction activities. • Operational Source Control BMP – Street Sweeping. • Operational Source Control BMP – Storm Drain Cleaning. • Material reduction – Winter Maintenance Operation • Spill response and illicit discharge and connections on city streets. • Education, training, and collaboration. • O&M plan including SWPPP and SPP for City properties	Missing the following: good housekeeping practices, coordination with first responders	partial	Missing from UIC SWMP: • Note if the City implements good housekeeping practices (e.g., storage of materials and chemicals, during field operations such as during road repair, resurfacing, and striping, exterior building cleanning and vehicle washing) • Note if the City has a collaborative/coordinated relationship with first responders regarding spill incidents and if so discuss how this works in relation to responding to spills. Additional items to consider in the UIC SWMP: • Discuss overlap with source control elements in the MS4 permit and their corresponding MS4 SWMP and if the City is considering including these items when they develop their source control program for the UIC SWMP. • Note if the City performs any line cleaning to remove legacy pollutants that may have accumulated in conveyance pipes. • In regards to the City's sweeping program, note if the City uses regenerative air sweepers.
	SourceControl Source control is necessary to protect ground water from pathogens, pesticides, nitrates, road salts and other anti-icing and deicing chemicals, fuel additives, and many other pollutants in urban runoff, as well as accidental spills. The operational and structural source control BMPs that are also required to meet the non-endangerment standard for various land uses are described in Chapter 8 - Source Control or other equivalent manuals. Targeted education and outreach may also be a necessary source control measure. Source control BMPs can significantly reduce clogging and pollutants, especially solids, and must beused at all project sites. Protect UIC wells during the construction phase to prevent sediment fromentering the UIC well. Implement the BMPs in Chapter 7 - Construction Stormwater PollutionPrevention or in an equivalent manual. Where there are no existing runoff treatment BMPs topractically address a pollutant issue and where filtration by the vadose zone cannot provideadequate removal of pollutants, owners are required to use source control BMPs to meet the non-endangerment standard. Otherwise, the discharge to the UIC well is prohibited (WAC 173-218-090(1)(c)(i)(D)). See 5.6.12 Prohibitions for		No mention in the UIC SWMP of the city appling Source Control BMPs from the SWMMEW although it is implied with the write up. Per the UIC SWMP the city follows the MS4 permit to provide E&O.	No mention in the SWMMEW of the City using Source Control BMPs from the SWMMEW. Also need to address E&O taylored to UICs.	partial	explicitly state that the City uses source control BMPs from the SWMMEW in the UIC SWMP. **Need an E&O program targeted to UICs that focus on relevant source control for pollutants associated with land uses with the potential to have runoff flowing to their UIC wells.** This can include E&O programs that support and enhance effectiveness of their other source control/pollution prevention programs (e.g., public awareness of spill reporting hotlines). **E&O should consider development and deployment of staff training training plan that communicates applicable training expectations by various job types.** Also note that source control program for existing development (i.e., inspections of pollutant generating sources at publicly and privately owned institiutional, commercial, and industrial sites) will likely be in the next MS4 permit for EWA so elements of the UIC SWMP for source control will likely overlap with the permit.
	Wherever practicable, reduce the exposure of stormwater to these contaminants by one or more of the following: - Careful attention to the product label application rates - Targeted product use to avoid contamination of stormwater runoff - Careful management of the storage and use of products - Separation of areas where products are used from contributing areas that discharges to a UIC well - Spill response planning Contact the local jurisdiction to determine whether specific source control requirements apply to your project in addition to those methods described in this manual for the proposed land use.		See response in row 58	See response in row 58	See response in row 58	See response in row 58
	Runoff Treatment The BMPs chosen for the site must remove or reduce the target pollutants to levels that will comply with State ground water quality standards when the discharge reaches the ground water table or first comes into contact with an aquifer (see Chapter 173-200 WAC). Each BMP is designed to reduce or eliminate certain pollutants. See other sections in Chapter 5 - Runoff Treatment BMP Design for specific runoff treatment BMP design criteria. Removing solids from stormwater runoff before it is discharged to a UIC well helps preserve infilt-ration rates over the long term. UIC wells used for flow control are required to have solids removedprior to discharge. Treatment for solids removal (basic treatment, see the Glossary for definition)must be designed, constructed, operated and maintained in accordance with this manual or anequivalent manual. Designers may alternatively use the demonstrative approach (5.6.9 The Demonstrative Approach)should they wish to install a BMP that is not included in this manual. Some pollutants may require additional treatment beyond that provided by the approved BMPs described in other sections in Chapter 5 - Runoff Treatment BMP Design. The text below discusses these pollutants.		addressed in 5.6.16	addressed in 5.6.16	addressed in 5.6.16	addressed in 5.6.16
	Bacteria Fecal coliform bacteria and other pathogens in stormwater come from many sources. Examples are manure fertilizers, pet waste, and animal feeding operations. Runoff treatment BMPs are unreliable in removing fecal coliform bacteria and other pathogens from runoff. Because of this, UIC wells shall not receive direct stormwater discharges from areas or sites that generate high loadings of fecal coliform bacteria, such as animal feeding operations. Alternatively, runoff from sites generating high loadings of bacteria and pathogens may be: - Discharged to the sanitary sewer, if allowed by the local jurisdiction; or - Used for crop irrigation, as long as other applicable requirements are met; or - Directed to a bioretention, biofiltration, or bioinfiltration BMP after the nutrient budget is addressed; or - Diverted through stormwater treatment wetlands (BMP T5.73) prior to discharge to a UIC well. Municipal UIC well owners must implement appropriate source control, targeted education and outreach, and illicit discharge detection and elimination programs in areas served by their UIC wells to prevent pet wastes from contaminating stormwater and to control other sources of pathogens. UIC wells in the vicinity of land application areas (i.e., along adjacent roadways) must be protected by appropriate buffers and berms to prevent manure-contaminated runoff from entering the UIC well. Best practices for setbacks, nutrient budgets, and timing of application must also be implemented. Private UIC well owners must ensure that their UIC wells are appropriately protected from sources of bacterial contamination.		Not addressed in the UIC Plan.	How the City addresses Bacteria needs to be in the UIC SWMP	none	Include discuss in the UIC SWMP regarding how the City addresses bacteria including pet waste. Other items to consider when developing the UIC SWMP: Is the City completely on sanitary sewer or are there any septic systems? If septic system exists, do they coordidate with the relevent entity (e.g., Health Department/Health District) on identifying high risk areas for failing septic system? Source tracing for failing septic systems? Is source control for bacteria sources a component of any of their E&O programs/campaigns (e.g., pet waste)?

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	Soluble Pollutants, Pesticides, Fertilizer, and Nutrients Many soluble pollutants that are commonly found in stormwater (including pesticides, fertilizers, road salts, and other chemical pollutants) are very difficult to remove from stormwater. Source controls applicable to the land use and activities at the site are required to reduce the contamination of stormwater from these chemicals. Areas such as parks, playgrounds, golf courses, public ball fields, cemeteries, and urban landscape typically use pesticides and fertilizers for landscape management. Examples of other activities that generate high nutrient loads include commercial composting, commercial animal handling areas, nurseries, and land application areas. Pesticides include a host of chemicals with varying chemical fate and transport characteristics. Some pesticides travel to ground water more readily because they are more water soluble and less likely to "stick" or sorb to soil particles. These pesticides need treatment by a biological treatment method, such as a biofiltration swale or constructed wetland. UIC wells that receive stormwater with pesticides that use one of these biological treatment methods are rule-authorized when they are registered, providing this technical guidance is followed. If UIC owners wish to use a different treatment method for pesticides, they may apply to the department for rule-authorization using the demonstrative approach outlined in 5.6.9 The Demonstrative Approach. Nonbiological treatment systems are ineffective at removing these pollutants from runoff. Instead, runoff from these types of landscaped areas should be directed to bioretention, biofiltration, or bioinfiltration systems or constructed wetlands prior to discharge to UIC wells. Stormwater with fertilizer or nutrients may be used to irrigate crops and/or landscaped areas in accordance with other applicable requirements.		Per the UIC SWMP, the city collects monitoring data from 17 wells in Spokane county and evaluates the data to determine trends in contaminant levels. Based on the data available soluble pollutants such as pesticides, fertilizers, and nutrients appear to provide minimal contributors to street and roadway facilities due to minimized runoff from landscape surfaces. Bioinfiltration and bioretention are in the UIC SWMP but not wetlands.	none	compliant	Additional items to consider in the UIC SWMP: Are the 17 well sites monitored representative of their larger UIC network? Is this sample size statistically sufficient? Does the City implement integrated pest management to reduce their application risk? Information about this should be included in the SWMP to strengthen the city's approach and assumptions.
	Ecology encourages use of the following practices: - Limited use of applied chemicals - Site design to minimize runoff from the landscaped surface - Development of a pesticide management plan UIC wells in the vicinity of land application areas (i.e., along adjacent roadways) must be protected by appropriate buffers and berms to prevent manure-contaminated runoff from entering the UIC well. Best practices for setbacks, nutrient budgets, and timing of application must also be implemented.		Could not find these practics in the UIC SWMP: Limited use of applied chemicals, Site design to minimize runoff from the landscaped surface, and Development of a pesticide management plan.	No mention of these items in the UIC SWMP	none	In the UIC SWMP, need to address the following: Limited use of applied chemicals, Site design to minimize runoff from the landscaped surface, and Development of a pesticide management plan. This could be addressed with a integrated pest management to reduce their application risk or a "no spray zones" policy for high risk areas. Also consider implementing an E&O campaign cover this issue.
	Industrial Activities with Requirements to Monitor for Nitrate, Nitrite, Ammonia, or Phosphorus The U.S. EPA lists industrial activities that have monitoring requirements for nitrate, nitrite, ammonia, or phosphorus. Runoff from sites where nitrate, nitrite, ammonia, or phosphorus come into contact with stormwater must be directed to one of the following: - Bioretention, biofiltration, or bioinfiltration systems - Constructed wetlands prior to discharge - Sanitary sewer, if allowed by the local jurisdiction - Municipal drainage system that discharges to surface water, if allowed by the local jurisdiction and following treatment for removal of solids Facilities may complete a no exposure certification as part of Ecology's UIC well registration process for exemption from these requirements. In order to qualify, no outdoor processing, handling, or storage of raw solid materials or finished products may take place at the facility. Industrial facilities that qualify for no-exposure certification may use the Tables in 5.6.17 Classification of Vadose Zone Treatment Capacity to determine treatment requirements.		Does not appear to be in the UIC SWMP.	Need to address in the UIC SWMP	none	Include discussion in the UIC SWMP regarding how the city addresses: Industrial Activities with Requirements to Monitor for Nitrate, Nitrite, Ammonia, or Phosphorus. If they do not apply to the City, state that in the UIC SWMP and explain why. Additional suggestions include: Consider developing a source control program for existing development (i.e., inspections of pollutant generating sources at publicly and privately owned institiutional, commercial, and industrial sites) akin to the one that may get intoduced into next MS4 permit for EWA could incorporate proactive inspections for these activities, particular for sites with the potential to discharge to the Citys UIC system.
	Commercial Site Roofs With Ventilation for Commercial Indoor Pollutants Roof runoff from commercial businesses with ventilation systems specifically designed to remove commercial indoor pollutants must be evaluated on a case-by-case basis to identify the pollutants of concern and the appropriate treatment requirements. In general, this runoff may be classified as a "medium" pollutant loading source (see Table 5.22: Pollutant Loading Classifications for Solids, Metals, and Oil in Stormwater Runoff Directed to UIC Wells), and the requirements of this section may be applied to discharges from these areas to UIC wells.		Does not appear to be in the UIC SWMP.	Need to address in the UIC SWMP	none	Include discussion in the UIC SWMP regarding how the city addresses:Commercial Site Roofs With Ventilation for Commercial Indoor Pollutants. If they do not apply to the City, state that in the UIC SWMP and explain why. Also see additional suggestions above.
	Commercial Site Outdoor Handling or Storage Treatment for solids removal (basic treatment) is required at commercial sites with outdoor handling or storage of raw solid materials. Examples include gravel, sands, logs, salts, and compost.		Does not appear to be in the UIC SWMP.	Need to address in the UIC SWMP	none	Include discussion in the UIC SWMP regarding how the city addresses: Commercial Site Outdoor Handling or Storage. If they do not apply to the City, state that in the UIC SWMP and explain why. Also see additional suggestions above.
	Industrial Site Roofs Roof runoff from industrial facilities must be evaluated on a case-by-case basis and should be treated according to the other Best Management Practice requirements for the facility.		Does not appear to be in the UIC SWMP.	Need to address in the UIC SWMP	none	Include discussion in the UIC SWMP regarding how the city addresses: industrial site roofs. If they do not apply to the City, state that in the UIC SWMP and explain why. Also see additional suggestions above.
	Industrial Sites Outdoor Handling or Storage Owners at industrial sites where outdoor processing, handling, or storage of raw solid materials or finished products, including outdoor loading areas for these materials or products, takes place must provide solids removal (basic treatment). These are sites defined by the U.S. EPA (40 CFR 122.26 (b)(14)).		Per the UIC SWMP Industrial sites covered by individual industrial stormwater permits must comply with the specific source control and runoff treatment BMPs listed in their permits.	none	none	see additional suggestions above.
5.6.14	**Spills and Illicit Discharges**					
	Appropriate spill control, prevention and response measures for various land uses are described in Chapter 8 - Source Control and in equivalent manuals. The spill control requirements in Chapter 8 -Source Control apply to all stormwater discharges to UIC wells. Any spills that pose a threat togroundwater quality should be reported to Ecology. Petroleum spills that enter a UIC well must bereported to Ecology.	immediately	Per page 56 of the UIC SWMP, Spills can be categorized four ways: 1. Emergency or Hazardous Spills to Ground – See figure 12. 2. Emergency or Hazardous Spills to Water – See figure 12. 3. Non-Emergency Spills and Illicit Discharges/Connections that can reach COSV Stormwater System. See Figure 13. 4. Non-Emergency Spill and Illicit Discharges/Connections that Do Not reach COSV Stormwater System. See Figure 13. The UIC SWMP also notes that Illicit connections are handled on a case by case basis.	elements of the program are missing	partial	The UIC SWMP also notes that Illicit connections are handled on a case by case basis. Recommend connecting this to how prohibitions are addressed. Also include disucssion about how illicit connections are found during inspection and maintenance. Additional suggestions when developing the UIC SWMP include: •Note if the city will continue to follow MS4 IDDE requirements or if they will be modified and if so how they will be modified. •Discuss how source control measures in SWMMEW Chapter 8 will be implimented as response measures. •Proactive inspection of residential areas, commercial, industrial, agricultural, institutional, construction sites and activities that pose a risk to discharging to UIC facilities •Targeted IDDE screening and enhanced pollutant source tracing for areas and activities identified as high pollutant generating risk to UICs •Targeted education and outreach campaigns, including municipal staff training, to support and improved effectiveness of source control programs, technical assistance, and other aspects involved in deploying escalating enforcement measures.

Manual Section & pg #	Complete Manual Description	Compliance Timeframe (immediate or	Summary of Activities Associated with Compliance	Description of Program Gap	Current Programs Compliance Coverage (none, partial, compliant, exceeds)	Description of Recommended Improvement
5.6.15	**Deep UIC Wells**					
	UIC wells that extend below an upper confining layer and discharge into the underlying vadose zone are designated by Ecology as deep UIC wells. This includes drywells where drilling extends through a surficial till layer into the vadose zone below. Local jurisdictions may impose additional limits on the total depth of these UIC wells based on specific hydrologic conditions and other considerations.	none specified	There is no mention of deep drywells in the UIC SWMP.	no mention of deep UIC wells in the UIC SWMP	partial	If the City does not have any deep UIC wells, that should be stated in the UIC SWMP. If the City has them or plans to allow them, that sould also be addressed in the UIC SWMP with reference to following the requirements in Section 5.6.15 of the SWMMEW.
	Ecology recommends that project proponents explore alternative approaches to stormwater management before deciding to use a deep UIC well. Projects using deep UIC wells must provide the following: - A hydrogeologic study that details the following, to determine if contamination could occur: o Consideration of potential changes to the aquifer. o Infiltration testing to determine mounding affects. o Identification of the direction and rate of ground water flow. o Evaluation of the treatment capacity of the vadose zone (see 5.6.16 Determining Treatment Requirements and 5.6.17 Classification of Vadose Zone Treatment Capacity). o Determination as to whether the proposed deep UIC well is located within a ground water protection area (GWPA) such as a wellhead protection area. o If a deep UIC well is located within a GWPA, assessment of the vulnerability of the drinking water supply source as follows: n Evaluate whether the introduction of stormwater will affect the quality of the ground water at the water supply well. n Describe the following hydrogeologic factors that may influence the vulnerability of a groundwater supply source: l Depth of the drinking water well screened interval in relation to the deep UIC well infiltration depth, and l Presence or lack of a confining layer between the land surface and the aquifer interval, and l Type of material between the land surface and the aquifer, and between the bottom of the deep UIC well and the aquifer. l An O&M manual for the deep UIC wells and treatment structures that includes a schedule for their implementation. l A list of source control BMPs that will be implemented to minimize solids entering the deep UIC well. l Description of any additional special runoff treatment needs and site operation requirements. l A minimum of basic treatment for all discharges to drywells to remove suspended sediments, and to prevent sediment entering the well structure and vadose zone. l A minimum 15-foot separation between the base of the drywell and the surface of the seasonal high ground water table. l Stabilization of the site prior to the drywells going on line to prevent sediment entering the drywells.	none specified	see above	see above	see above	see above
	In the design phase of a deep UIC drywell proposal, the project proponent should notify the drinking water supply purveyor when the proposed UIC well will be located in a wellhead protection area, Critical Aquifer Recharge Area or a Sole Source Aquifer. Submittal of a State Waste Discharge Permit application may be required and will be determined on a site-by-site basis following the evaluation of the UIC permit application. Ecology will notify the project proponent if this is the case.		see above	see above	see above	see above
5.6.16	**Determining Treatment Requirements**					
	For all stormwater discharges to UIC wells, some form of treatment is required. Treatment may be provided by the vadose zone or by structural treatment BMPs, and depends on the geologic conditions, the land use, and activities at the project site. There are some exeptions based on site-specific or local studies to the treatment required in tables 5.6.17		Discussion regarding how the city meets this requirement are described in the UIC SWMP section titled "TREATMENT REQUIREMENTS - PRESUMPTIVE APPROACH ".	none	compliant	The TREATMENT REQUIREMENTS - PRESUMPTIVE APPROACH section of the UIC SWMP is difficult to follow. Consider moving the entire contents of this section to the appendix and instead replace it with discuss on how the city impliments the requirements and reference the
5.6.17	**Classification of Vadose Zone Treatment Capacity**					
	The treatment capacity of the vadose zone is classified as high, medium, low, or none. Ecology bases these classifications on minimum thickness and the characteristics of the geologic materials that make up the proposed treatment layer.		see above	none	compliant	see above

APPENDIX G

Full-Time Equivalent Summary

Requirement or Stormwater Element	Existing Programmed	Existing - Not Programmed	Minimum Required	Pro-Active	2024-29 Anticipated MS4 Permit	Existing Fees per Permit Cycle	Minimum Required Fees per Permit Cycle	Pro-Active Fees per Permit Cycle	Consultant Notes - FTE explanation for Minimum Required and Proactive Here	City Comments
2019-2024 MS4 EWA Phase II Permit Section	**2.00**	**0.87**	**1.04**	**0.00**	**0.00**	**$132,928**	**$675,000**	**$0**		
S4. Compliance With Standards	0	0	0	0		$0	$500,000	$0	$100k/year added to account for unexpected permit requirements	
S5. Stormwater Management Program For Cities, Towns, and Counties	0.310	0	0.1	0		$0	$0	$0	Minimum Required: FTEs to develop a coordination mechanism to encourage coordinated stormwater related policies and develop an ongoing/established program for tracking, maintaining, and using info to evaluate SWMP development, implementation, and permit compliance.	Chad - 0.18 (0.13/0.05) John - 0.1 Aaron - 0.1 (0.08/0.02)
S5.B.1 Public Education & Outreach (E&O)	0.140	0	0.01	0		$40,000	$0	$0	fees added to hire consultant for the E&O evaluation. Minimum Required: FTEs added to develop a strategic schedule for providing specific subject area information to different target audiences and to develop E&O program for engineers, construction contractors, developers, development review staff, and land use planners.	Aaron - 0.14
S5.B.2 Public Involvement and Participation	0.000	0.008	0.01	0		$0	$0	$0	Minimum Required: FTEs added to develop a program or policy for ongoing opportunities for the public to participate in the development, implementation, and updates of the SWMP.	PIO - 0.008
S5.B.3 Illicit Discharge Detection and Elimination	0.200	0.020	0.185	0		$0	$0	$0	Minimum Required: FTEs are for adding missing GIS information about swales, pipes, and SW facilities.	Aaron - 0.118 (0.1/0.018) - illicit discharge response estimated. To balance 0.1 - exist programmed, 0.018 added to min required. Aaron - 0.125 (0.1/0.025) - Mapping estimated. To balance 0.1 - exist programmed, 0.025 added to min required Emergency Spill Cleanup/Able - Shane - 0.01
S5.B.4 Construction Site Stormwater Runoff Control	0.120	0.400	0.03	0	**See 2024-2029 Anticipated MS4 Permit Requirements**	$17,928	$0	$0	Fees are fo training and in the existing budget (2 full days for certification, 1 day for re certification every 3 years. Approx. 18 people.). Minimum Required: FTEs are for developing a process to: establish a communication channel with Ecology to be notified when Ecology has granted a waiver within the City, determine sites with high potential for sediment transport and create policy to inspect sites with high potential for sediment transport prior to clearing and grading for construction, and document site specific training, including who attended, role, topics covered.	Tyson - 0.2 John - 0.1 Chad Phillips - 0.02 Staff - 0.2
S5.B.5 Post Construction Stormwater Management	0.050	0.250	0.05	0		$0	$0	$0	Minimum Required: FTEs are to develop ordinance to require structural BMPs to be inspected at least once every 5 years after final installation, or more frequently as determined by the Permittee and create program and schedule to inspect structural BMPs within the MS4 area once every five years. Also to develop formal training for all staff involved in permitting, planning, review, inspection, and enforcement. The City already conducts informal training, but needs to document the process.	Chad Riggs - 0.15, 0.1 Chad Phillips - 0.05
S5.B.6 Municipal Operations and Maintenance	0.940	0.190	0.650	0		$0	$175,000	$0	$175K to account for loss of Geiger Crews Minimum Required FTE is the UICs being flow control structures and all the required inspections. Minimum Required also includes FTEs for developing a formal O&M training with documentation process for inspection of each facility, spot check SW control facilites after a major storm event, develop a formal plan and schedule to inspect water quality and flow control facilities, update O&M plan to include inspection schedules, develop O&M plan for parks and open spaces, update O&M plan to incldue practics and procedures to address parking lots and collection/conveyance systems.	Vactoring - Brandt - 0.67, Aaron -0.05 (0.02/0.03). John - 0.02 , shane - 0.05 Sweeping - Shane - 0.05, John - 0.03 Landscaping - Shane - 0.03, Aaron - 0.15 (0.1/0.5) Emergency Cleanup/Geiger - Shane - 0.06 John - 0.1 - O&M development & yearly revisions The extra 0.05 FTE is from the MS4 compliance interview.
S8. Monitoring and Assessment	0.040	0.000	0	0		$75,000	$0	$0	city portion for effectiveness studies	Chad - 0.04
S9. Reporting and Record Keeping	0.100	0.000	0	0		$0	$0	$0		Aaron - 0.1
General	0.100	0.000	0	0		$0	$0	$0		Chad - 0.10

Requirement or Stormwater Element	Existing Programmed	Existing - Not Programmed	Minimum Required	Pro-Active	2024-29 Anticipated MS4 Permit	Existing Fees per Permit Cycle	Minimum Required Fees per Permit Cycle	Pro-Active Fees per Permit Cycle	Consultant Notes - FTE explanation for Minimum Required and Proactive Here	City Comments
2024-2029 Anticipated MS4 Permit Requirements	**N/A**	**N/A**	**N/A**	**N/A**	**0.46**	**$0**	**$365,000**	**$0**		
Controlling Runoff (from 1AC to 5000 PGIS & 10,000 New Imp. surface)					0		$0		not a change for City	
Education & Outreach - CBSM					0.1		$40,000		Potential requirements to develop an education and outreach campaign using Social Marketing and conduct an evalution of the campaign. Fees & FTE estimate assume evaluation completed by consultant and campaign developed by city or in partnership with another agency.	
Effectiveness Studies					0		$75,000		Anticipated changes to effectiveness study requirements will likely drive the cost up. $75k Fees added, double from last round of effectiveness studies.	
Stormwater Retrofits (Stromwater Structural Controls (SSC) & Stormwater Management Action Plan (SMAP))		**N/A**			0.15	**N/A**	$100,000	**N/A**	Stormwater retrofit requirements will likely be added to next permit. For FTE assumed SSC 0.02, SMAP 0.1, and 0.03 for grant/project admin. $100k is to hire a consultant for half of SMAP work with city doing other half. *OCI added fees to CIP estimate to cover match funds for one grant per permit cycle assuming a $5M grant for a MS4 retrofit project to be designed & constructed.*	
Enhanced Source Control - Program development					0.15		$150,000		Anticipated requirements for City to develop a source control program. FTE increase of 0.15 assumes split of work between city and consultant with $150k to	
Emering Pollutants					0.01		$0		New pollutants maybe added to stormwater manuals, 0.01 FTE increase to account for adjusting City procedures to account for pollutants on for new and redevelopment projects.	
Environmental Justice Incorporation					0.05		$0		FTE time to impliment EJ throughout programs	

Requirement or Stormwater Element	Existing Programmed	Existing - Not Programmed	Minimum Required	Pro-Active	2024-29 Anticipated MS4 Permit	Existing Fees per Permit Cycle	Minimum Required Fees per Permit Cycle	Pro-Active Fees per Permit Cycle	Consultant Notes - FTE explanation for Minimum Required and Proactive Here	City Comments
UIC Rule	**0.08**	**0.00**	**0.15**	**0.09**	**N/A**	**$0**	**$0**	**$0**		
5.6.2 Rule Authorization or Permit	0	0	0	0		$0	$0	$0	hours for this are covered in 5.6.3	
5.6.3 Registration	0.08	0	0.02	0		$0	$0	$0	Existing: 0.08 FTE for registering UIC wells. Minimum Required: 0.02 FTE to develop and implement a process to confirm registration forms are completed by consultant and submitted 60 days before construction.	Aaron - 0.08
5.6.4 Meeting the Non-Endangerment Standard	0	0	0.00	0		$0	$0	$0	For UIC SWMP add FTEs for developing and maintaining UIC SWMP	
5.6.5 Well Assessment	0	0	0.04	0.06		$0	$0	$0	0.16 FTE was included in existing (City deleted hours). Fees for retrofitting high priority UICs for 20 and 40 years added to budget. Minimum Required: 0.04 FTE to implment plan for retrofitting high priority retrofits. Proactive: 0.06 FTE to identify measurable goals to guide UIC retrfit plan and/or implement plan for retrofitting medium and low priority UICs.	
5.6.6 Preservation and Maintenance Projects	0	0	0	0		$0	$0	$0	How the city addresses preservation and mainenance projects should be addressed in the UIC SWMP but the time to do this is neglible so hours were not	
5.6.7 Emergency Situations	0	0	0	0		$0	$0	$0	How or if the City addresses emergency situations should be addressed in the UIC SWMP but the time to do this is neglible so hours were not added.	
5.6.8 The Presumptive Approach	0	0	0	0		$0	$0	$0	Need to address how flow control or source control is used to meet the presumptive approach.	
5.6.9 The Demonstrative Approach	0	0	0	0		$0	$0	$0	The UIC SWMP should state if the demonstrative approach will be allowed and under what condtions. Then indicate that the demonstrative approach as defined in the SWMMEW 5.6.9 would be followed.	
5.6.10 Siting and Design of New UIC Wells	0	0	0	0	**N/A**	$0	$0	$0	FTEs for this item are captured in the CIP stormwater elements	
5.6.11 Operation and Mainntenance of UIC Wells	0.00	0.00	0.00	0		$0	$0	$0	O&M hours are captured in the MS4 compliance checklist. Includes hours for Aaron to make maps (existing), develop inspection forms and document inspectionsfor developing new O&M plan (minimum required). Need to add hours to develop UIC O&M Plan.	Assuming entire city is MS4, O&M of UICs would be accounted for in MS4 permit O&M section. 0.08 - exist and 0.02 min required moved to MS4 permit O&M as min required.
5.6.12 Prohibitions	0.00	0.00	0.01	0.01		$0	$0	$0	Prohibitions are not mentioned in the UIC SWMP and should be listed in the ordinances. FTEs are for Minimum Required: add discussion about prohibitions to UIC SWMP and Proactive: adding more explicit language to ordiannces about prohibited discharges to UICs.	No existing prohibitions. Moved to Min required
5.6.13 Source Control and Runoff Treatment Requirements	0	0.00	0.06	0		$0	$0	$0	FTE hours are covered in the MS4 estimate for existing and anticipated permit requirements for developing a source control program. Additional hours for minimum required are for developing and implementing E&O programs that will support the source control program.	
5.6.14 Spills and Illicit Discharges	0	0.00	0.02	0.02		$0	$0	$0	Most hours are covered in MS4 FTE estimate under existing. Additional hours shown are: Minimum to add and implement missing elements to UIC SWMP or suggestions for pro-active approach.	move 0.02 to MS4
5.6.15 Deep UIC Wells	N/A	0.00	N/A	N/A		$0	$0	$0	assume the city does not have any because the depth to ground water is so deep. If they city has them or will allow them, they need to be addressed in the UIC SWMP.	
5.6.16 Determining Treatment Requirements	0	0.00	0	0		$0	$0	$0	hours are coverd in the SW elements: CIP for stormwater and none stormwater projects	
5.6.17 Classification of Vadoze Zone Treatment Capacity	0	0.00	0	0		$0	$0	$0	hours are coverd in the SW elements: CIP for stormwater and none stormwater projects	

Requirement or Stormwater Element	Existing Programmed	Existing - Not Programmed	Minimum Required	Pro-Active	2024-29 Anticipated MS4 Permit	Existing Fees per Permit Cycle	Minimum Required Fees per Permit Cycle	Pro-Active Fees per Permit Cycle	Consultant Notes - FTE explanation for Minimum Required and Proactive Here	City Comments
Stormwater Elements Not Regulated	**2.05**	**0.62**	**1.27**	**3.96**	**N/A**	**$100,000**	**$347,000**	**$325,000**		
Maintenance Coordination and Support	0	0	0	0.15		$0	$0	$0	Proactive: 0.13 FTE to manage dedicated maintenance staff, 0.02 FTE to develop and maintain process to identify when work needs to be done (prioritization process). Sufficient funds to complete all maintenance work each year.	Captured in Service Contract Support
Operation and Maintenance Management	0.48	0	0.04	0		$0	$0	$0	Minimum Required: 0.04 FTE for stormwater staff to provide Chester Creek annual cleanup.	Brandt - 0.23; Wes - 0.25 Remaining captured in Service Contract Support
Service Contract Support	0.02	0.09	0	1.3		$0	$0	$0	Service contract fees included for this element. Proactive: 0.5 FTE for Street Sweeping (GPS tracking, evaluate current strategy for improvement, adjust for regulatory area requirements, service contract inspector), 0.1 FTE Storm Drain Cleaning (implement electronic reporting, implement inspection strategy and duties, evaluate current strategy for improvements, adjust for regulatory area requirements), 0.5 FTE Roadway Landscaping Maintenance (evaluate effectiveness of contract structure, implement electronic reporting, implement inspection strategy & duties into service, dedicated in house staff for work, service contract inspector), 0.2 FTE Roadway Weed Control (service contract inspector).	Majority of this captured in permit section O&M Street Repair and Maint - Shane - 0.01, Aaron - 0.01 Vegetation Management - Shane 0.02, Aaron - 0.01 Weedspraying - Shane - 0.06
Development Engineering Coordination and Support	0.04	0	0	0.01		$0	$0	$75,000	$75,000 for consultant to develop companion document that goes with SRSM and 0.01 FTE is for City staff to manage consultant and then maintain document.	Chad - 0.01, Aaron - 0.01, John 0.02
CIP Coordination and Support (nonstormwater capital projects)	0.2	0	0.5	0.96		$0	$0	$0	Minimum Required: 0.5 FTE increase City added for one capitol improvement project/year design to inspection. Proactive: 0.96 FTE is to develop/manage a nonreactive process (0.02 FTE), dedicated stormwater staff providing stormwater/drainage design (0.92 FTE), develop/manage enhanced inspection checklist (0.02 FTE).	Chad - 0.20
Utility Locates	0	0	0.04	0		$0	$312,000	$0	0.04 FTE for updating mapping. $312K fees to hire a utility locate company.	City prefers to contract this effort.
Stormwater Capital Improvement Program	0	0.5	0.2	0.1		$0	$0	$200,000	Minimum Required: Fees added to CIP budget to replace aging infrastructure. 0.2 FTEs added for managing a consultant/constractor who will perform this work. Proactive: $200k fees included to hire a consultant to develop a robust capital improvement plan and 0.1 FTE to manage the work and then implement the work.	1 Storm CIP project per year. Project team fte - 0.5
Small Works Program	0.1	0	0.16	0.04	**N/A**	$0	$0	$0	Fees of $300K/yr should be in budget for small works. Minimum Required: 0.16 FTE for dedicated staff for small works projects. Proactive: 0.04 FTE for storm-event reconnaissance planning.	Presently 0.25 is every 3 years, need 0.25 per year John - 0.1
UIC Retrofit Plan and Strategy Administration *(UIC compliance work; FTE estimates are on the UIC compliance cheklist)*	0	0	0	0		$0	$0	$0	FTE estimates moved to the UIC checklist: 5.6.5 Well Assessment	
Citizen Complaints Response	0.15	0	0.1	0.05		$0	$0	$0	Minimum Required: was 0 FTE, city moved 0.1 FTE from existing. City to add what was moved. Proactive: 0.05 FTE to zero out Q-alerts or maintenance list each year with a justification for why.	Aaron - 0.25 (0.15/0.10)
GIS/Asset Management/Webpage/Mapping Management *(overlap with MS4 Permit; 1 FTE moved to MS4 compliance checklist)*	0.33	0	0.15	1		$0	$0	$50,000	Minimum Required: 0.15 FTE to map items that fall under critical areas ordinance. Proactive: $50k to purchase asset management software and 1.0 FTE to implement asset management software and redevelop programs, collect and lazorfiche historical data, resolve ownership issues regarding CoSV/County/WSDOT facilities, upgrade mapping, develop more robust mobile data collection application, develop more online mapping application, and develop pollutant loading road map.	Aaron - 0.125 (0.1/0.025) Matt - 0.23
Program Management, Policy and Procedure Development	0.25	0	0	0.25		$0	$0	$0	*Proactive: 0.25 FTE for swale modifications permit, develop hydraulic library, review for standard plan updates, prepare flushing plan requirement, prepare wastewater plan requirement.*	Chad - 0.25
Grant Research Development and Administration	0.35	0	0	0.1		$0	$0	$0	Grant match funds are included in CIP budget. .Proactive: 0.1 fte develop plan/frequency for grant application to supplement CIP and UIC retrofit plan as well as coordination efforst with planning/grants for proactive approach for high category drywells.	Adam - 0.25 Chad - 0.1
Regulatory Compliance Administration (MS4 and UIC)	0.13	0.03	0.08	0		$100,000	$35,000	$0	FTEs for developing MS4 SWMP included in S5. Remaining minimum required FTEs are for separating the programs. $100k is for lidar updates performed every 5 years and $35k is a car for a new FTE.	Chad - 0.1 John - 0.03 Henry - Update modeling 0.15 fte/5yrs

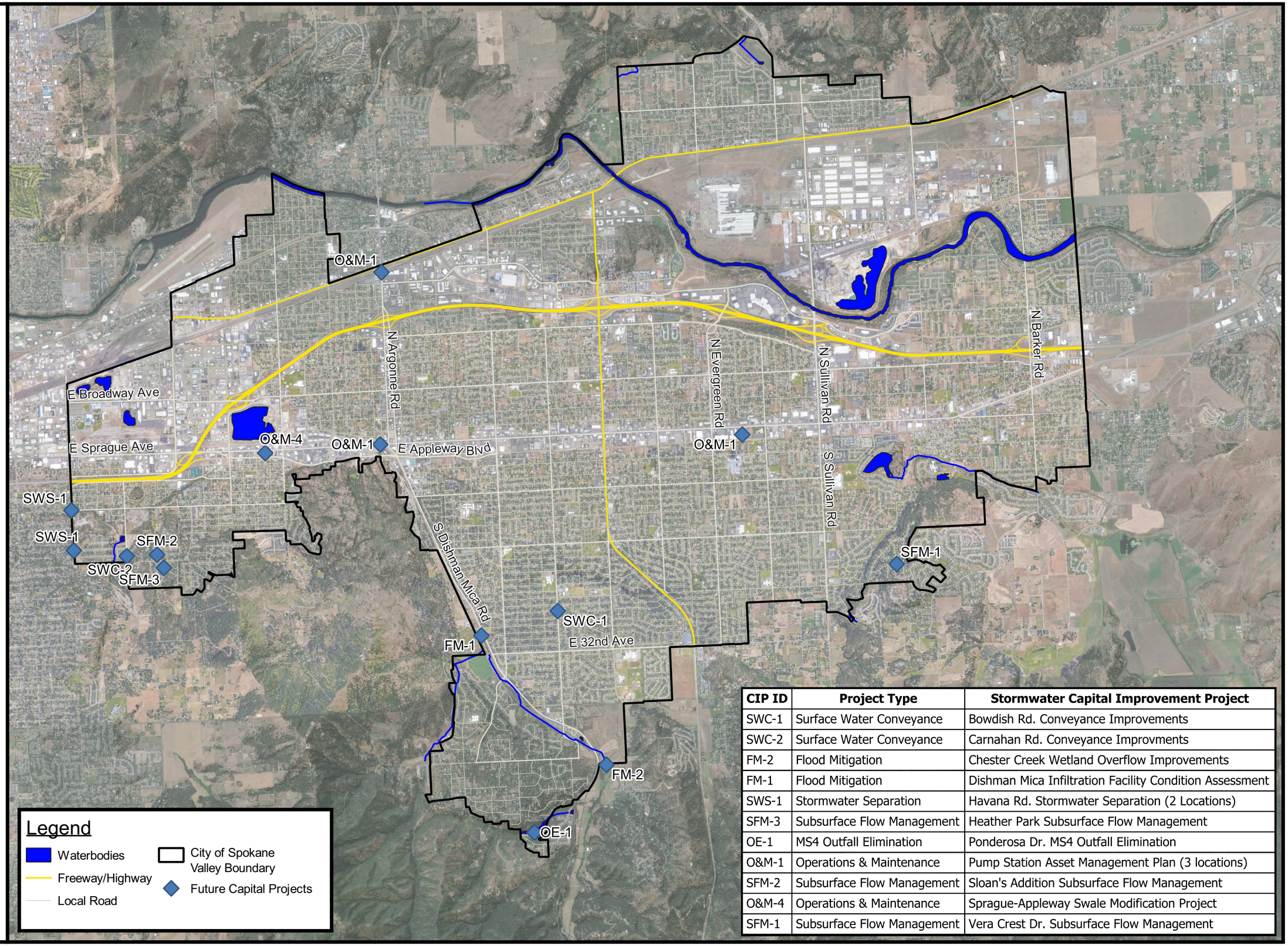
Requirement or Stormwater Element	Existing Programmed	Existing - Not Programmed	Minimum Required	Pro-Active	2024-29 Anticipated MS4 Permit	Existing Fees per Permit Cycle	Minimum Required Fees per Permit Cycle	Pro-Active Fees per Permit Cycle	Consultant Notes - FTE explanation for Minimum Required and Proactive Here	City Comments
FTE & Fee Sub-Totals & Totals										
Sub-Totals	4.13	1.49	2.46	4.05	0.46	$232,928	$1,387,000	$325,000	Estimated Fees per Permit Cycle	
Total Programmed Existing + Total Non-Programmed Existing	5.62					$46,586	$277,400	$65,000	Exstimated Fees per Year	
Total Programmed Existing + Total Non-Programmed Existing + Minimum Required	8.07									
Total Programmed Existing + Total Non-Programmed Existing + Minimum Required + Anticipated MS4 Permit	8.53									
Total Programmed Existing + Total Non-Programmed Existing + Minimum Required + Anticipated MS4 Permit + Proactive	12.58									

APPENDIX H

Capital Improvement Project General Locations

Future Capital Improvement Projects

Stormwater Utility Program
Master Plan



CIP ID	Project Type	Stormwater Capital Improvement Project
SWC-1	Surface Water Conveyance	Bowdish Rd. Conveyance Improvements
SWC-2	Surface Water Conveyance	Carnahan Rd. Conveyance Improvments
FM-2	Flood Mitigation	Chester Creek Wetland Overflow Improvements
FM-1	Flood Mitigation	Dishman Mica Infiltration Facility Condition Assessment
SWS-1	Stormwater Separation	Havana Rd. Stormwater Separation (2 Locations)
SFM-3	Subsurface Flow Management	Heather Park Subsurface Flow Management
OE-1	MS4 Outfall Elimination	Ponderosa Dr. MS4 Outfall Elimination
O&M-1	Operations & Maintenance	Pump Station Asset Management Plan (3 locations)
SFM-2	Subsurface Flow Management	Sloan's Addition Subsurface Flow Management
O&M-4	Operations & Maintenance	Sprague-Appleway Swale Modification Project
SFM-1	Subsurface Flow Management	Vera Crest Dr. Subsurface Flow Management

OSBORN CONSULTING INCORPORATED

APPENDIX I

Capital Improvement Project Cost Back Up

Combined Inflation/Escalation Rates	
2016 Adjustment	3.30%
2017 Adjustment	1.93%
2018 Adjustment	3.20%
2019 Adjustment	2.60%
2020 Adjustment	1.90%
2021 Adjustment	22.03%
2022 Adjustment	21.03%
Total Compounded Adjustment (2016-2021)	**67.79%**

Note: Historical Data for combined Inflation and Escalation adjustments was used from 2017 to 2021. 2016 and 2022 adjustment rates were used from projected data from the City of Seattle.

CIP Escalated 2022 Costs				
CIP ID	CIP Name	Phases Included	2015 City Estimated Total Cost	2022 Escalated Total Cost
SWC-1	Bowdish Rd. Conveyance Improvements	Design	60,000	$ 110,000
		Construction	540,000	$ 910,000
		Total Cost Estimate	**$ 600,000**	**$ 1,020,000**
SWC-2	Carnahan Rd. Conveyance Improvements	Construction	$ 100,000	$ 170,000
		Total Cost Estimate	**$ 100,000**	**$ 170,000**
SFM-1	Vera Crest Dr. Subsurface Flow Management	Design	$ 70,000	$ 210,000
		Construction	$ 800,000	$ 2,360,000
		Total Cost Estimate	**$ 870,000**	**$ 2,570,000**
SFM-2	Sloan's Addition Subsurface Flow Management	Design	$ 50,000	$ 90,000
		Construction	$ 200,000	$ 340,000
		Total Cost Estimate	**$ 250,000**	**$ 430,000**
SFM-3	Heather Park Subsurface Flow Management	Design	$ 30,000	$ 60,000
		Construction	$ 270,000	$ 460,000
		Total Cost Estimate	**$ 300,000**	**$ 520,000**
FM-1	Dishman Mica Infiltration Facility Condition Assessment	Pre-Design	$ 40,000	$ 70,000
		Total Cost Estimate	**$ 40,000**	**$ 70,000**
FM-2	Chester Creek Wetland Overflow Improvements	Design	$ 40,000	$ 70,000
		Construction	$ 160,000	$ 270,000
		Total Cost Estimate	**$ 200,000**	**$ 340,000**
SWS-1	Havana Rd. Stormwater Separation (2 Locations)	Design	$ 30,000	$ 60,000
		Construction	$ 270,000	$ 460,000
		Total Cost Estimate	**$ 300,000**	**$ 520,000**
OE-1	Ponderosa Dr. MS4 Outfall Elimination	Design	$ 30,000	$ 60,000
		Construction	$ 250,000	$ 420,000
		Total Cost Estimate	**$ 280,000**	**$ 480,000**
O&M-1	Pump Station Asset Management Plan (3 locations)	Pre-Design	$ 45,000	$ 80,000
		Total Cost Estimate	**$ 45,000**	**$ 80,000**
O&M-4	Sprague/Appleway Swale Modification Project	Construction	$ 200,000	$ 300,000
		Total Cost Estimate	**$ 200,000**	**$ 300,000**

CIP ID: O&M-2 Stormwater System (Non-UIC) Replacement Projects - Quantities Replaced/Year Estimation

Individual Asset Replacement Costs

Catch Basin Replacement Cost

Item	Quantity	Averaged Unit Cost	Units	Source of Cost	Year of Cost
REMOVE EXISTING CATCH BASIN	1	$1,020.00	EACH	Sprague/Barker Intersection Improvement Project	2022
CATCH BASIN TYPE 1	1	$3,865.00	EACH	Sprague/Barker Intersection Improvement Project	2022
Total Cost		**$4,885.00**	EACH		

Pipe Replacement Cost

Item	Quantity	Averaged Unit Cost	Units	Source of Cost	Year of Cost	
REMOVE SD PIPE	1	$ 35.00	LF	Sprague/Barker Intersection Improvement Project	2022	
SCHEDULE A STORM SEWER PIPE 12 IN DIAM	1	$ 75.00	LF	WSDOT UBA Tab	2022	Note: (Contract Number: 009786, SCR, Qty: 567, 2/28/2022, $75,$78,$75)
Total Cost		**$110.00**	LF			

Ditch Replacement Cost

Item	Quantity	Averaged Unit Cost	Units	Source of Cost	Year of Cost	
DITCH EXCAVATION INCL. HAUL	1	14.4	C.Y.	WSDOT UBA Tab	2022	Note: (Contract Number: 009803, ER, Qty: 202, 3/28/2022, $16,$13.7,$13.5)
Total Cost		**$5.00**	LF			

Assumptions:
Assume 4-ft wide ditch and 1.5 ft depth for ditch removal
Assume Manhole cost is 20% greater than Catch Basin cost

Quantities of Assets Replaced/Year

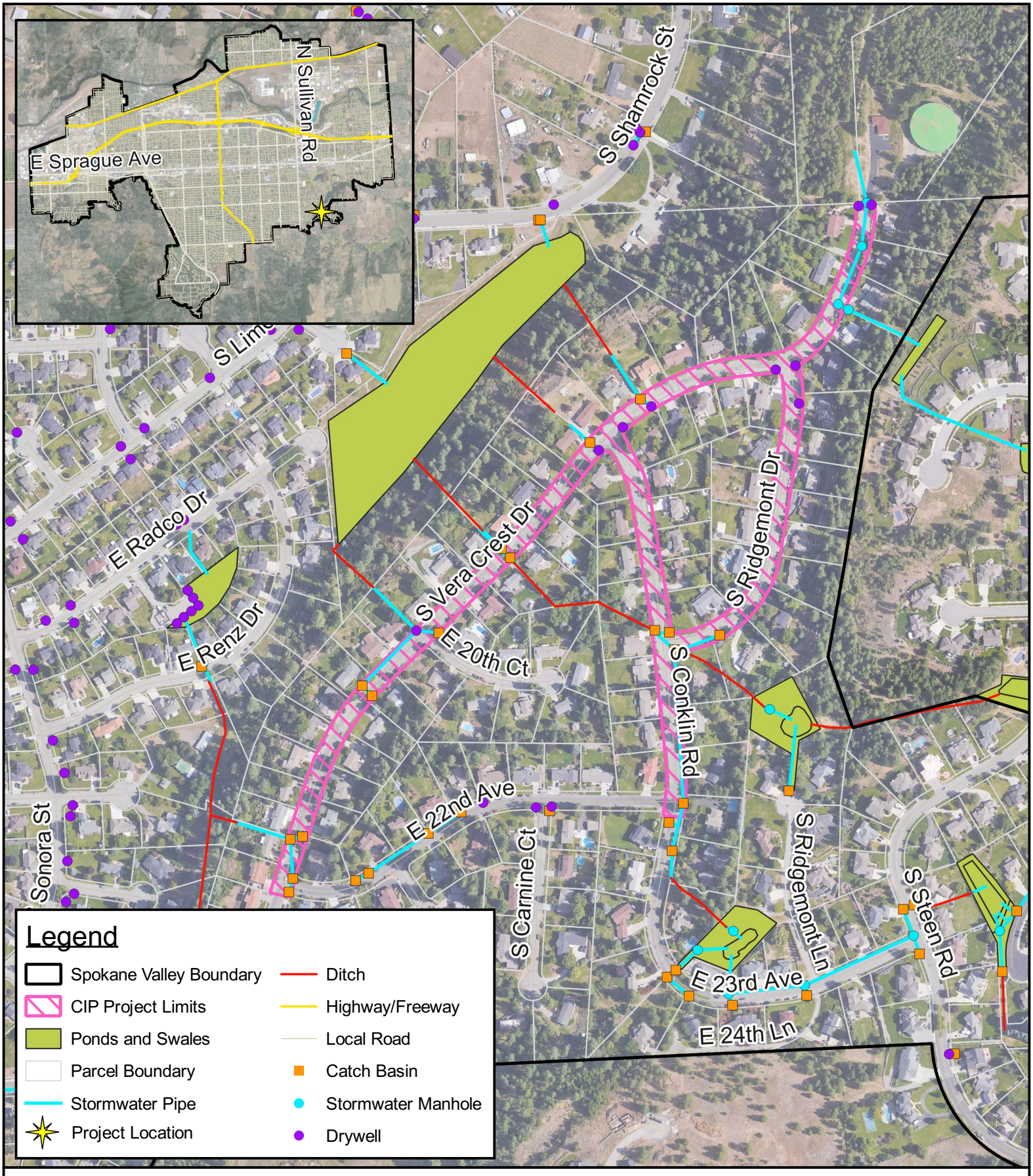
	Catch Basins (EACH)	Ditches (LF)	Pipe (LF)	Manholes (EACH)	
Quantity of Replacement/yr	19.2	294.6	911.5	0.8	**Total Cost**
Cost of Replacement	$93,996.75	$1,473.11	$100,266.00	$4,853.40	**$200,589.26**

Assumptions:
Budget is proportionally distributed between all asset types based on quanitity
Assumed 85% of structures have not yet been inventoried
Assumed 75% of pipes have not yet been inventoried

APPENDIX J

Capital Improvement Project Fact Sheets and Maps

CIP ID: SFM-1	Vera Crest Dr. Subsurface Flow Management	
Project Location	S Vera Crest Dr. (north of 22nd), S Conklin Rd. and S Ridgemont Dr.	
Project Type	Shallow Subsurface Flow Management	
Schedule	TBD	
Project Description	Shallow subsurface flow due to a restricting soil layer causes seepage onto the roadways including S Vera Crest Drive, S Conklin Road, and S Ridgemont Drive, creating nuisance flooding and icy conditions in the winter months . This project aims to install subsurface drainage along 5,250 LF of roadway, secure conveyance and treatment easement(s), install pretreatment and stormwater pipe, and connect to existing stormwater treatment ponds. This work would likely coincide with a roadway rebuild project. Planned subsurface drainage improvements would help preserve the roadway infrastructure A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Design	$210,000
	Construction	$2,360,000
	Total	**$2,570,000**



OSBORN CONSULTING INCORPORATED

N

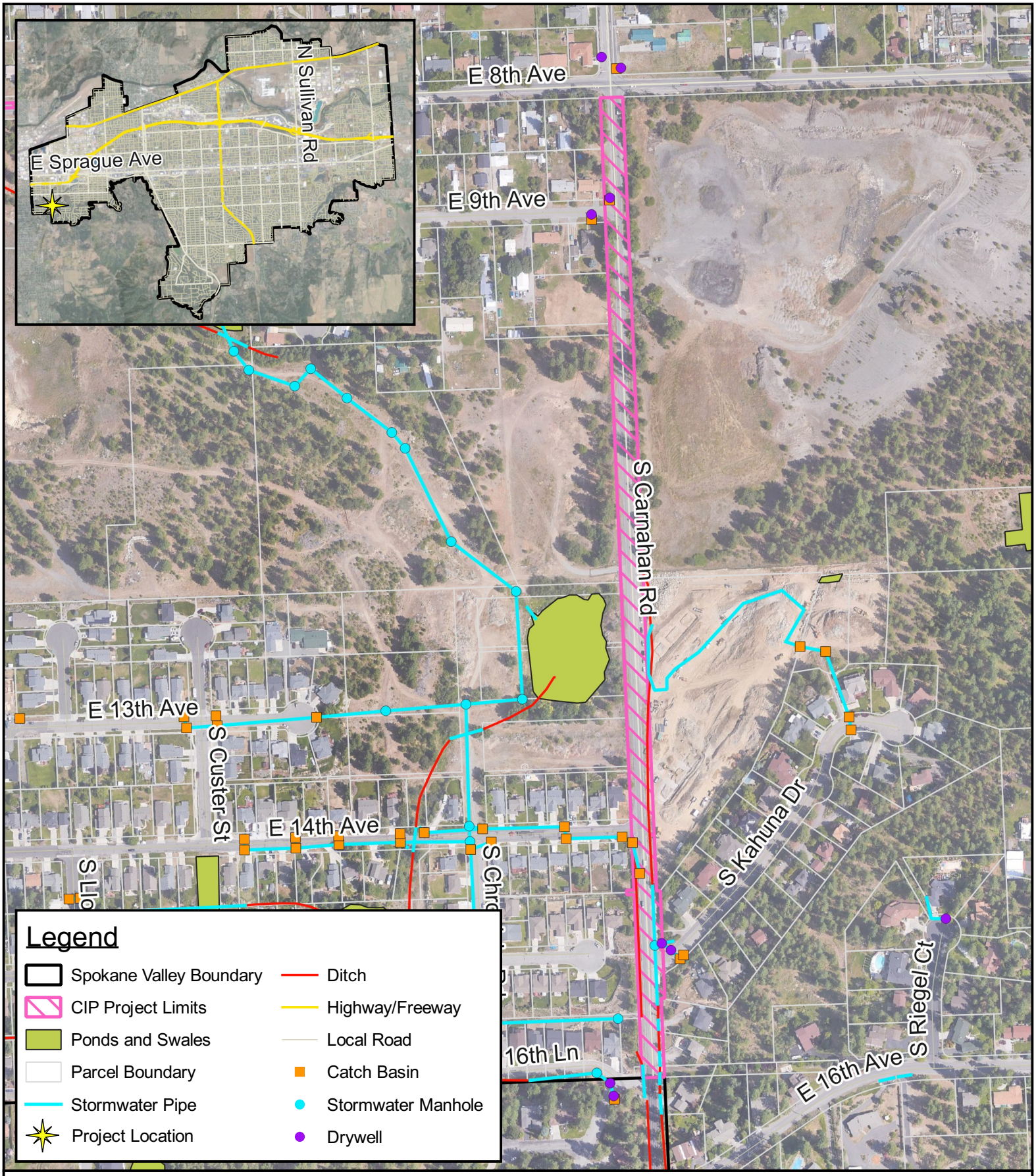
0 200 400 ft

CIP ID: SFM-1
Vera Crest Dr. Subsurface Flow Management

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: SWC-2	Carnahan Rd. Conveyance Improvements	
Project Location	Along Carnahan from the City Boundary (16th Ave.) to 8th Ave.	
Project Type	Surface Water Conveyance	
Schedule	TBD	
Project Description	Heavy winter sanding of Carnahan hill causes existing systems to clog resulting in surface drainage problems and erosion. With recent development in this area, stormwater infrastructure on the east side of Carnahan has been installed as part of required frontage improvements by private land owners. This CIP will target stormwater infrastructure for conveyance, treatment, and discharge on the west side of Carnahan. This includes a 2,620 linear feet stretch of roadway that slopes down towards 8th Avenue. The installation of improved conveyance (ditches and pipes) and additional structures will improve the ease of maintenance and allow for more responsive maintenance in the future. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Construction	$170,000
	Total	**$170,000**



OSBORN CONSULTING INCORPORATED

N

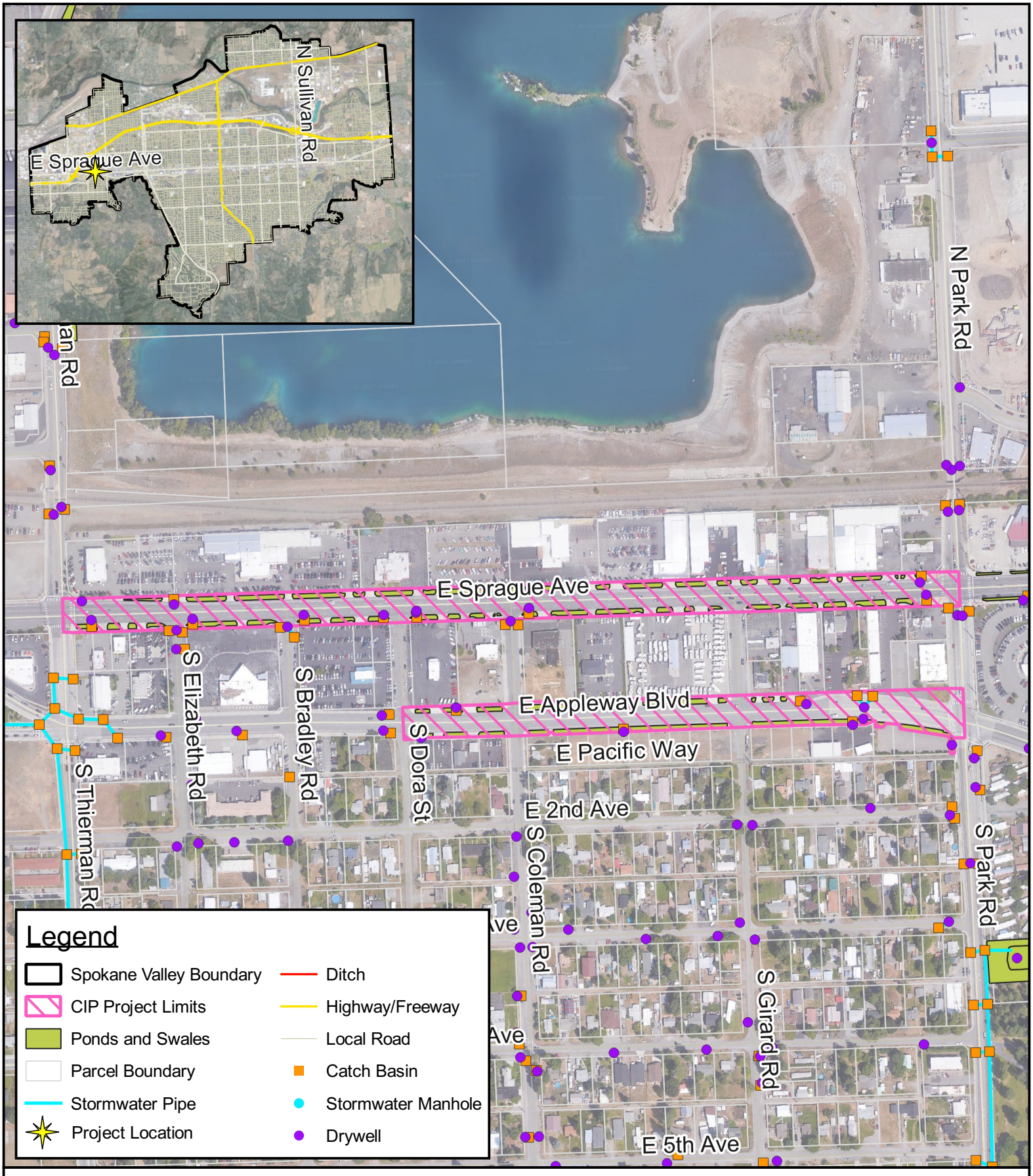
0 200 400 ft

CIP ID: SWC-2
Carnahan Rd. Conveyance Improvements

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: O&M-4	Sprague/Appleway Swale Modification Project	
Project Location	Sprague Ave from Park Rd. to Thierman Rd. and Appleway Ave. from Dora St. to Park Rd	
Project Type	Operations and Maintenance	
Schedule	TBD	
Project Description	This project includes 2,650 linear feet of swale improvements along Sprague Avenue, from Park Road to Thierman Road and 1,650 linear feet of swale improvements along E Appleway Avenue, from Dora Street to Park Road. The swales would be upgraded with new plantings, along with replacing the current drip irrigation system with a standard pop-up spray system.  	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Construction	$300,000
	Total	**$300,000**



OSBORN CONSULTING INCORPORATED

N

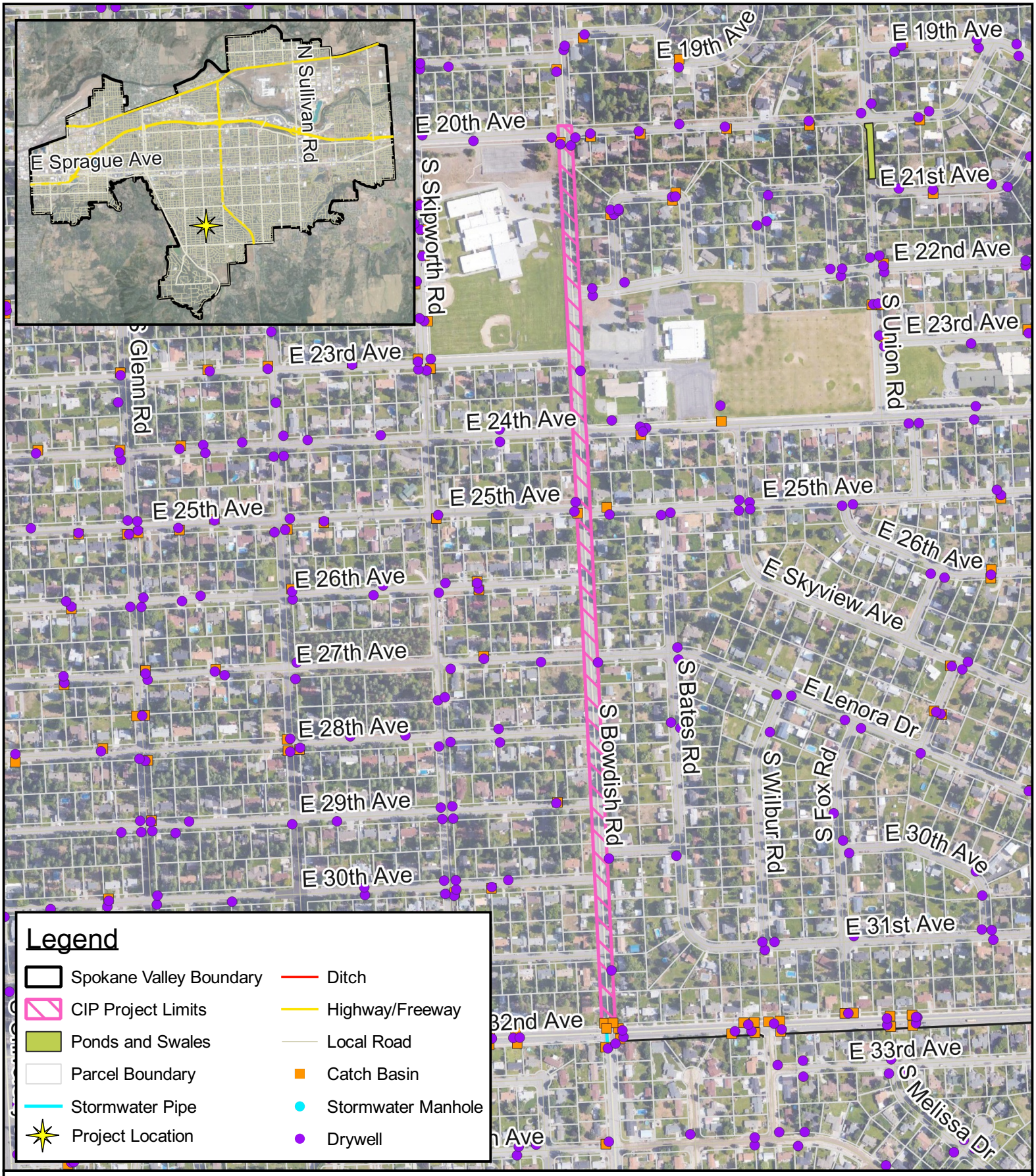
0 200 400 ft

CIP ID: O&M-4
Sprague/Appleway Swale Modification Project

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: SWC-1	Bowdish Rd. Conveyance Improvements	
Project Location	S Bowdish Rd. from E 32nd Ave. to E 20th Ave.	
Project Type	Surface Water Conveyance	
Schedule	TBD	
Project Description	Flooding and erosion issues have been prominent along this stretch of S Bowdish Road. The City's Public Works Department is planning to widen the street to provide sidewalk and other safety improvements. The stormwater utility will want to capitalize on this partnering opportunity to improve the flooding and erosion problems. The project would include installing collection, conveyance, and treatment facilities as part of the widening project. Improvements would include approximately 4,000 linear feet of new curb, gutter and storm drain system, along with the required water quality treatment facilities upstream of the existing or new UIC well. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Design	$110,000
	Construction	$910,000
	Total	**$1,020,000**



OSBORN CONSULTING INCORPORATED

N

0 250 500 ft

CIP ID: SWC-1
Bowdish Rd. Conveyance Improvements

Stormwater Utility Program Master Plan

CITY OF Spokane Valley

CIP ID: O&M-1	Pump Station Asset Management Plan (3 Locations)	
Project Location	N Argonne Rd., E Sprague Ave. (near S Dishman Rd.), & E Sprague Ave. (near S Best Ave.)	
Project Type	Operations and Maintenance	
Schedule	TBD	
Project Description	The City currently owns and operates three pump stations totaling four vaults and eight pumps. The project will evaluate the current condition and needs of these stormwater pumping stations and recommend a capital master plan for the next 30 to 50 years. This will help the City plan for identified, needed, and necessary replacements, repairs, and upgrades to keep the pump stations viable for years to come. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Pre-Design	$80,000
	Total	**$80,000**

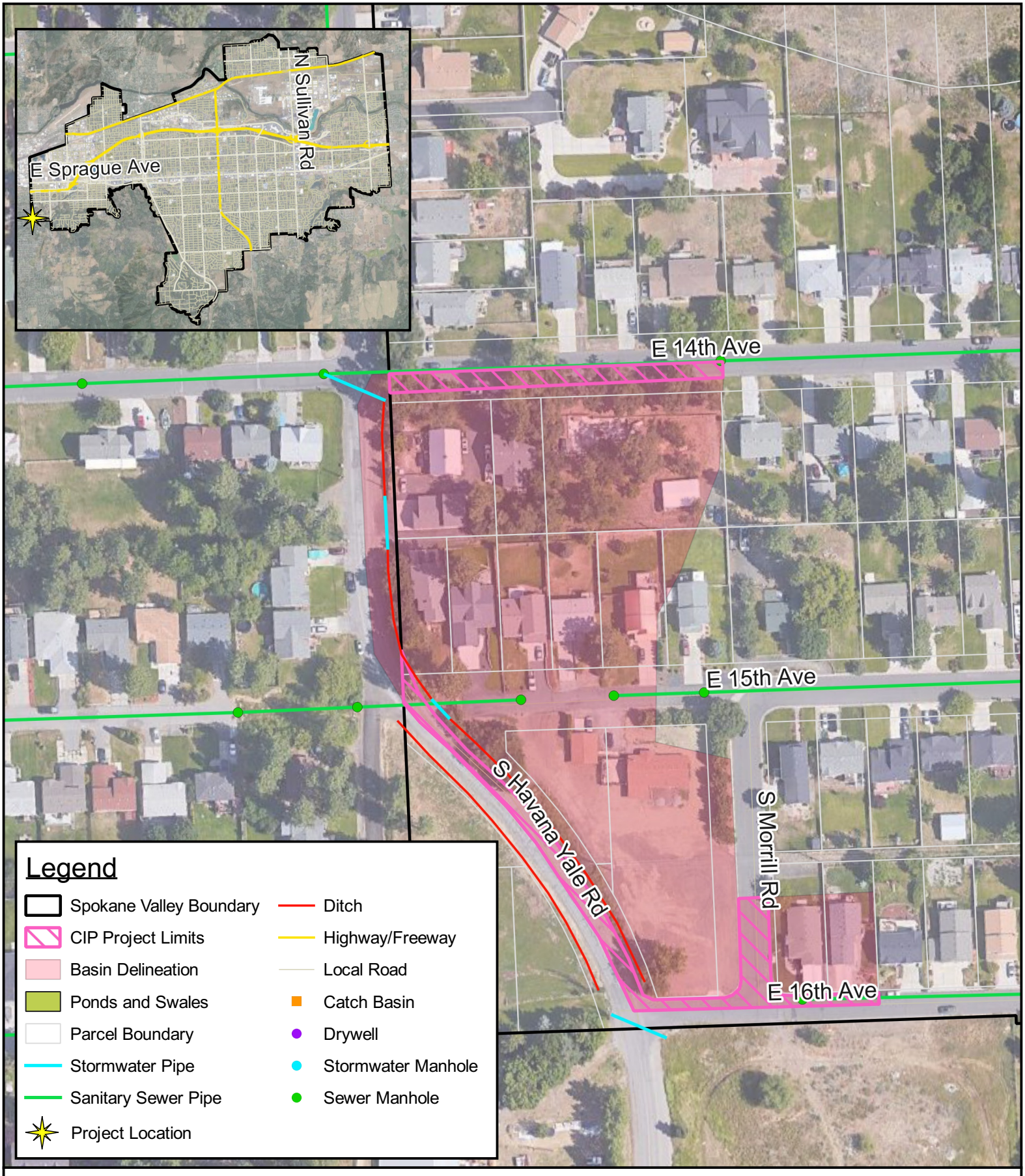
CIP ID: SWS-1	Havana Rd. Stormwater Separation (2 Locations)
Project Location	S Havana St., from E 16th Ave. to E 14th / E 8th Ave., from Custer Rd. to Havana St.
Project Type	Stormwater Separation
Schedule	TBD
Project Description	This project will separate stormwater runoff currently discharging to the City of Spokane CSO System. According to the *2014 Havana Combined Sewer Overflow Diversions Pre-Design Report*, the first of these areas is a basin of 2.39 acres along 8th Avenue from Havana Street to Custer Road and the second area is a basin of 4.11 acres along Havana Yale Street bounded between 16th Avenue, S Morril Road and 14th Avenue. Separated stormwater runoff would be routed, treated, and discharged to a regulated UIC well. This project will help the City meet current stormwater permit requirements. This project would also be a Grant candidate for final design and construction. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars.

	Havana-14th (acreage)	Havana-8th (acreage)	Total (acreage)
PGIS	0.47	0.48	0.94
NPGIS	0.97	0.82	1.78
Ground	2.68	1.09	3.77
Total	4.11	2.39	6.50

Location of Outfall at Havana Road and 8th Avenue

Grant Available?	☐ No ☑ Yes, _____

2022 Projected CIP Cost		
	Design	$60,000
	Construction	$460,000
	Total	**$520,000**



OSBORN CONSULTING INCORPORATED

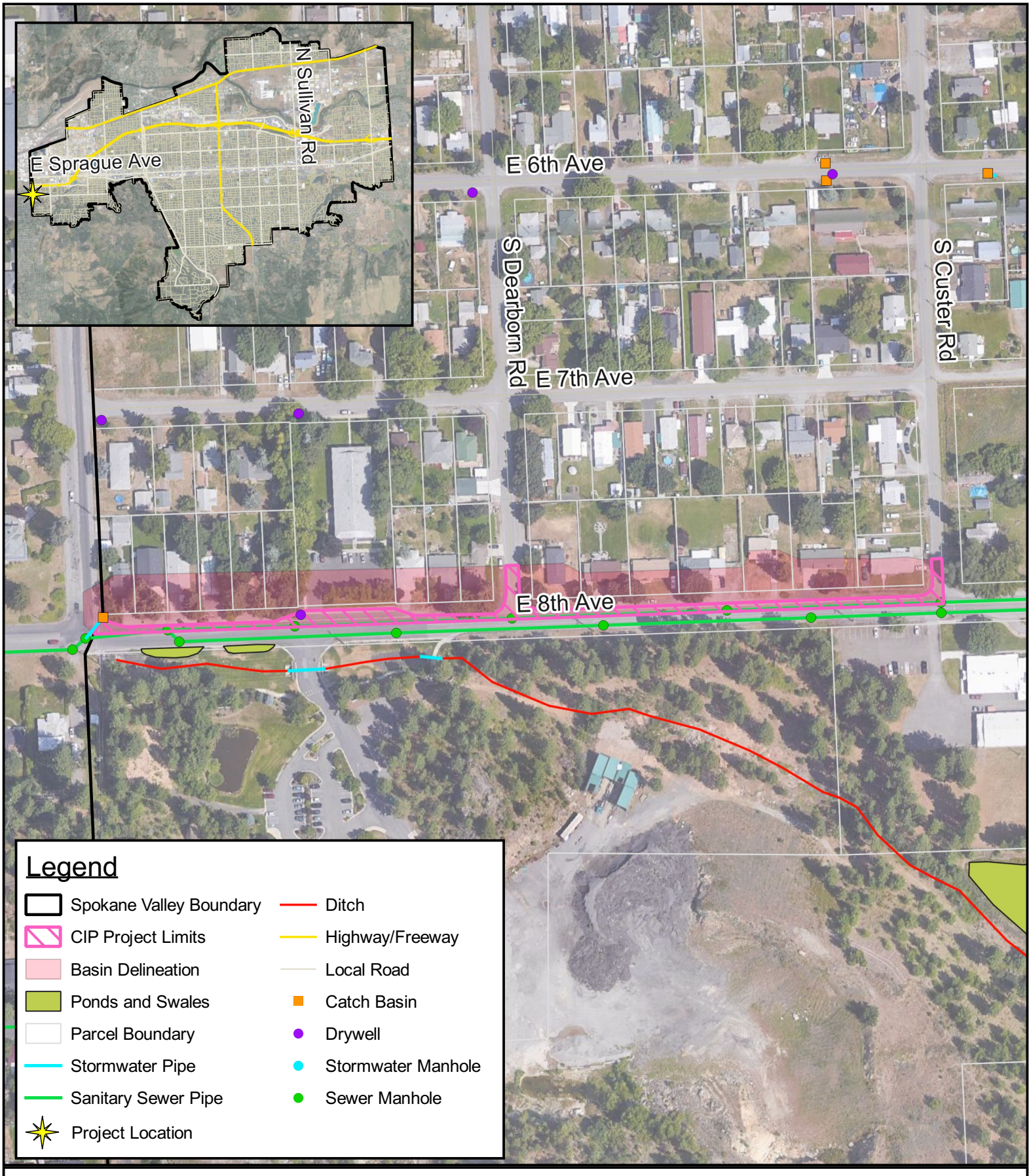
N

0 75 150 ft

CIP ID: SWS-1
Havana Rd. Stormwater Separation (E 14th Ave.)

Stormwater Utility
Program Master Plan

City of Spokane Valley



OSBORN CONSULTING INCORPORATED

N

0 100 200 ft

CIP ID: SWS-1
Havana Rd. Stormwater Separation (E 8th Ave.)

Stormwater Utility Program Master Plan

CITY OF Spokane Valley

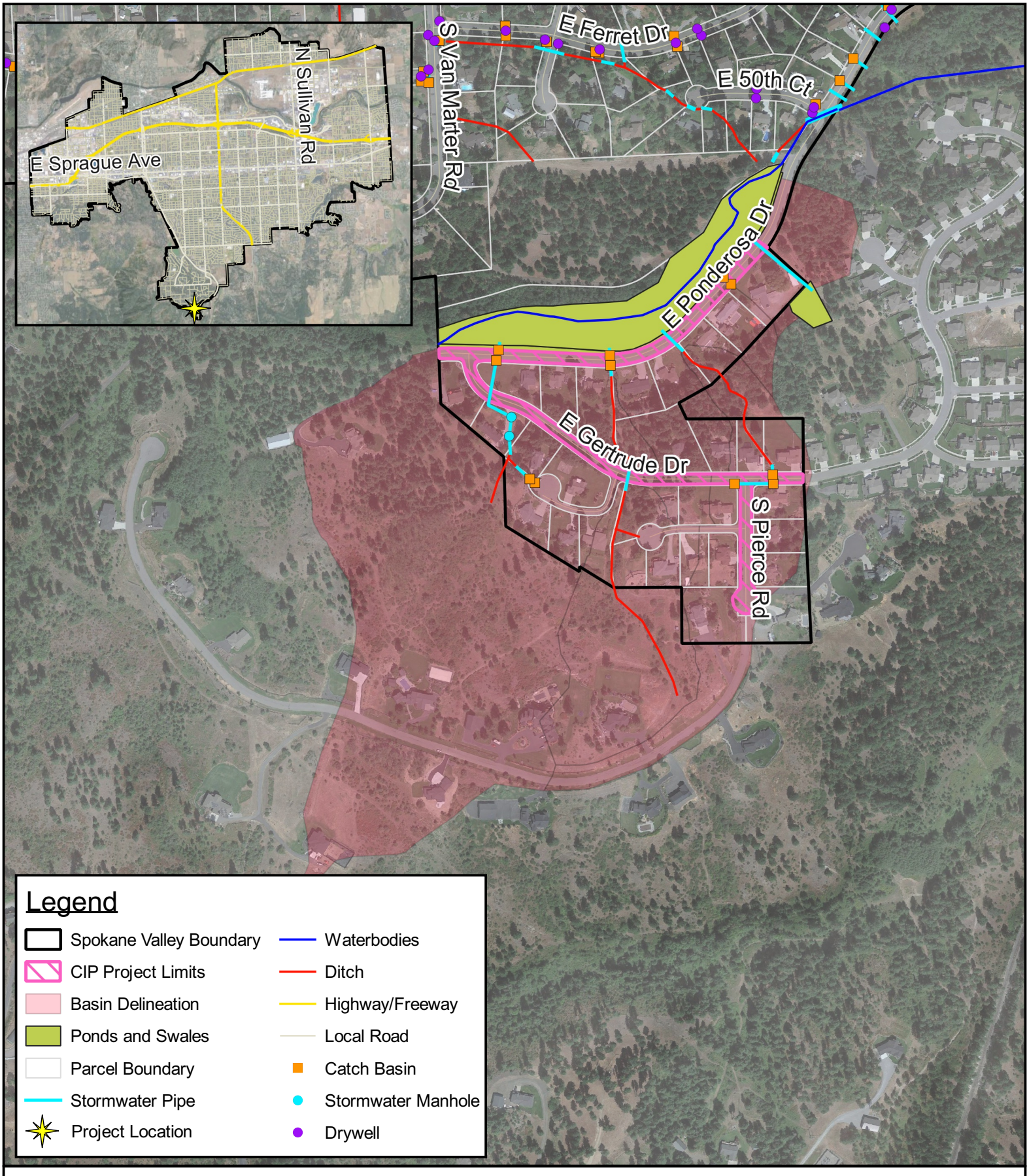
CIP ID: OE-1	Ponderosa Dr. MS4 Outfall Elimination
Project Location	Along E Ponderosa Dr. between E Gertrude Dr. and 50th Ct.
Project Type	MS4 Outfall Elimination
Schedule	TBD
Project Description	According to the *2014 Ponderosa Surface Water Diversions Pre-Design Report*, stormwater from the basin off of Ponderosa Drive drains 61.07 acres. The basin currently outfalls into an intermittent creek and eventually to Chester Creek. This project aims to eliminate the discharge to the MS4 system from Ponderosa Drive and route collected stormwater to a new or existing treatment BMP or biofiltration swale and regulated UIC well. This project will help the City meet current stormwater permit requirements. This project would also be a Grant candidate for final design and construction. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars.

	Ponderosa (acreage)
PGIS	3.27
NPGIS	7.08
Ground	50.72
Total	61.07

Location of Outfall at Havana Road and 8th Avenue

Grant Available?	☐ No ☑ Yes, _____

2022 Projected CIP Cost		
	Design	$60,000
	Construction	$420,000
	Total	**$480,000**



OSBORN CONSULTING INCORPORATED

N

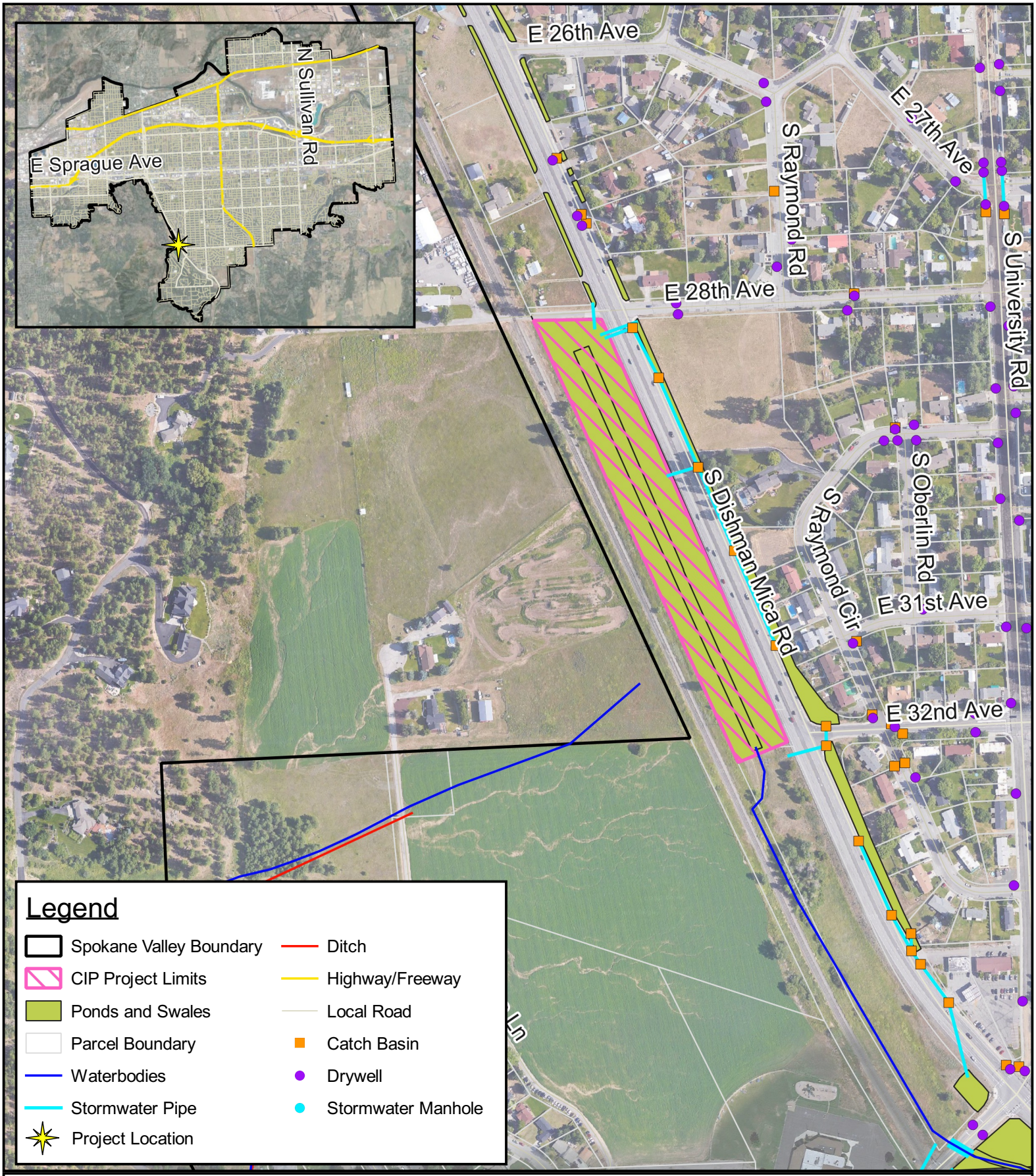
0 250 500 ft

CIP ID: OE-1
Ponderosa Dr. MS4 Outfall Elimination

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: FM-1	Dishman Mica Infiltration Facility Condition Assessment	
Project Location	West of S Dishman Mica Rd., South of E 28th Ave.	
Project Type	Flood Mitigation	
Schedule	TBD	
Project Description	The 1500 ft long facility covering 5 acres parallel to Dishman Mica Road currently infiltrates all flows from Chester Creek. According to the *1997 Spokane County Stormwater Utility Chester Creek Watershed Plan* , the Chester Creek Watershed is 23.3 square miles with steep hillsides in the upper watershed and an urbanized floodplain in the lower portion of the basin. The infiltration facility was constructed in the 1990's and design documents are not available, leaving the infiltration capacity unknown This project will assess sedimentation, provide geotechnical testing, provide prolonged infiltration testing, determine the infiltration capacity, and provide a routine inspection and maintenance plan. Future phases of the project would include facility upgrades based on suggested recommendations from the planning level study. This project is a grant candidate under Ecology Centennial Clean Water Fund. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☐ No ☑ Yes, Ecology Centennial Clean Water Fund	
2022 Projected CIP Cost	Pre-Design	$70,000
	Total	**$70,000**



OSBORN CONSULTING INCORPORATED

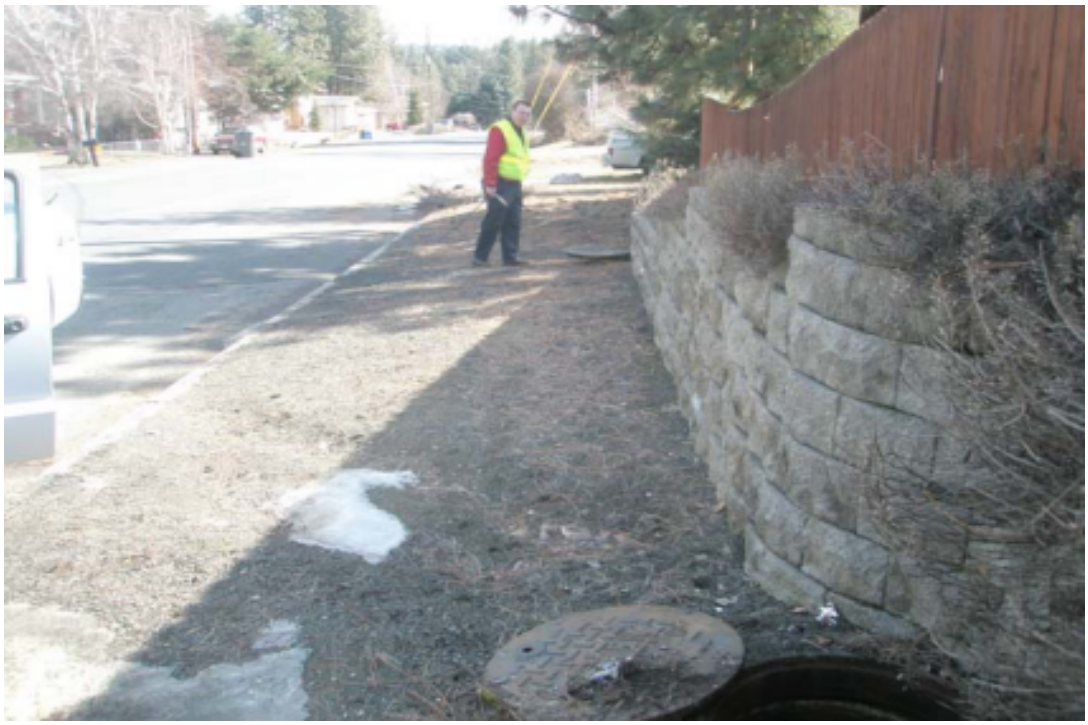
N

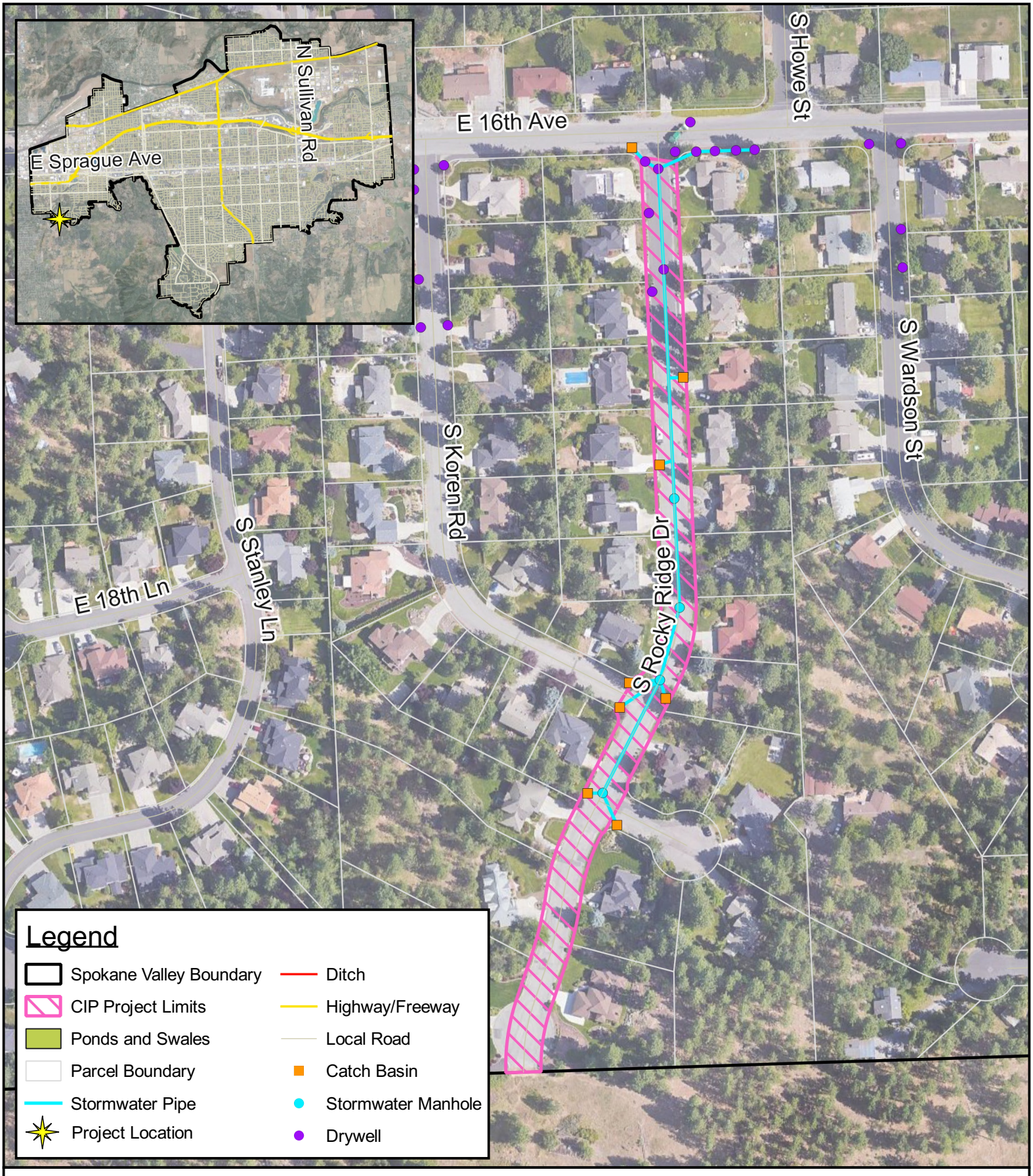
0 200 400 ft

CIP ID: FM-1
Dishman Mica Infiltration Facility Condition Assessment

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: SFM-3	Heather Park Subsurface Flow Management	
Project Location	W 16th Ave & S Rocky Ridge Dr	
Project Type	Shallow Subsurface Flow Management	
Schedule	TBD	
Project Description	Shallow subsurface flow due to a restricting soil layer causes roadway degredation on Rocky Ridge Drive. This condition creates nuisance flooding and icy conditions in the winter months. This project aims to install subsurface drainage along 1350 linear feet of roadway, secure conveyance and treatment easement(s), install pretreatment and stormwater pipe, and convey to existing functioning ponds or drywells. This work would likely coincide with a roadway rebuild project. Planned subsurface drainage improvements would help preserve the roadway infrastructure. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Design	$60,000
	Construction	$460,000
	Total	**$520,000**



OSBORN CONSULTING INCORPORATED

N

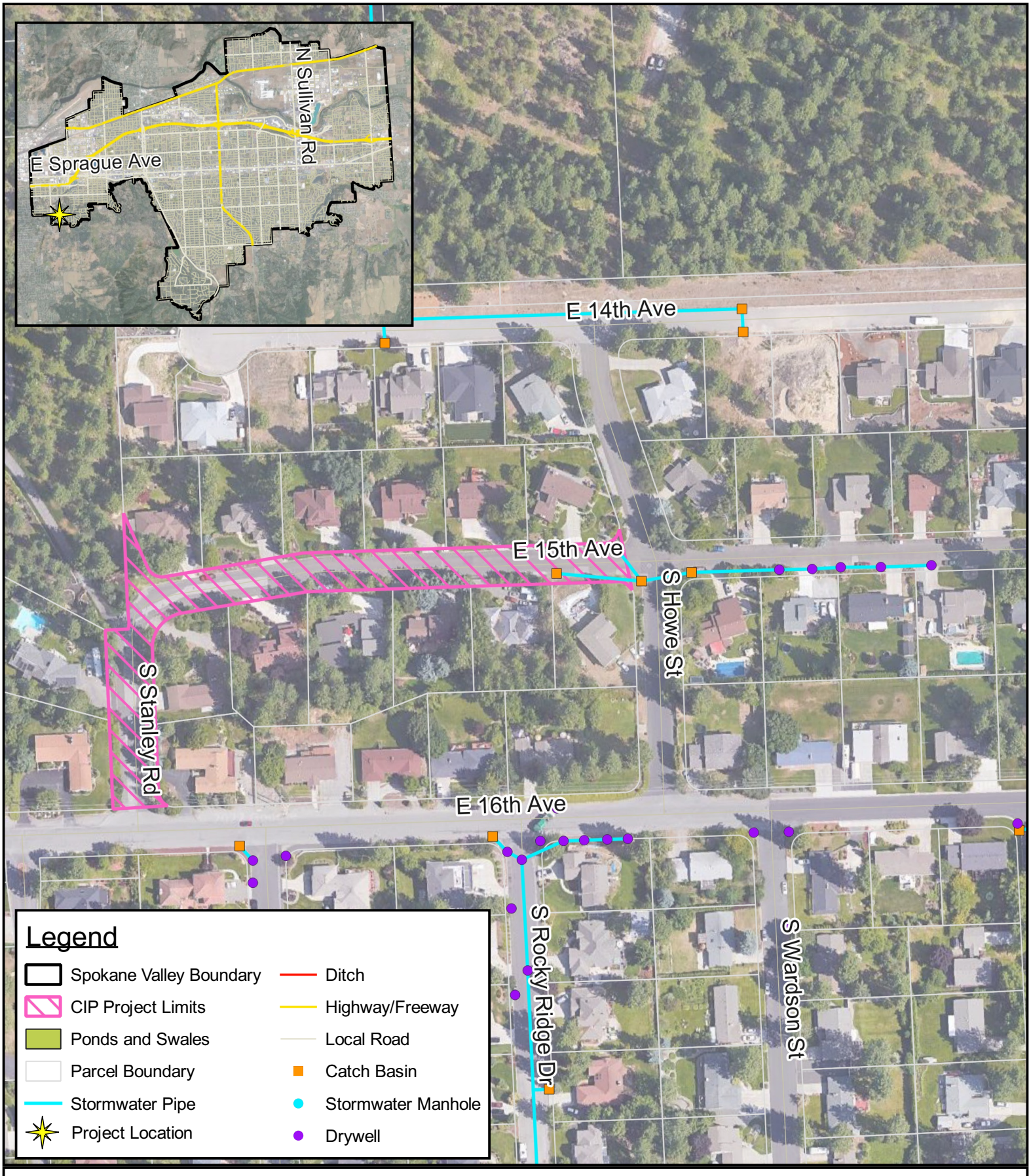
0 100 200 ft

CIP ID: SFM-3
Heather Park Subsurface Flow Management

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: SFM-2	Sloan's Addition Subsurface Flow Management	
Project Location	S Stanley Rd. & E 15th Ave. (West of S Howe Rd.)	
Project Type	Shallow Subsurface Flow Management	
Schedule	TBD	
Project Description	Shallow subsurface flow due to a restricting soil layer causes seepage onto S Stanley Road creating nuisance flooding and icy conditions in the winter months. This project aims to install subsurface drainage along 950 linear feet of roadway, secure conveyance and treatment easement(s), and connect to existing structures one block away, on 15th avenue. This work would likely coincide with a roadway rebuild project. Planned subsurface drainage improvements would help preserve the roadway infrastructure. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☑ No ☐ Yes, _____	
2022 Projected CIP Cost	Design	$90,000
	Construction	$340,000
	Total	**$430,000**



OSBORN CONSULTING INCORPORATED

N

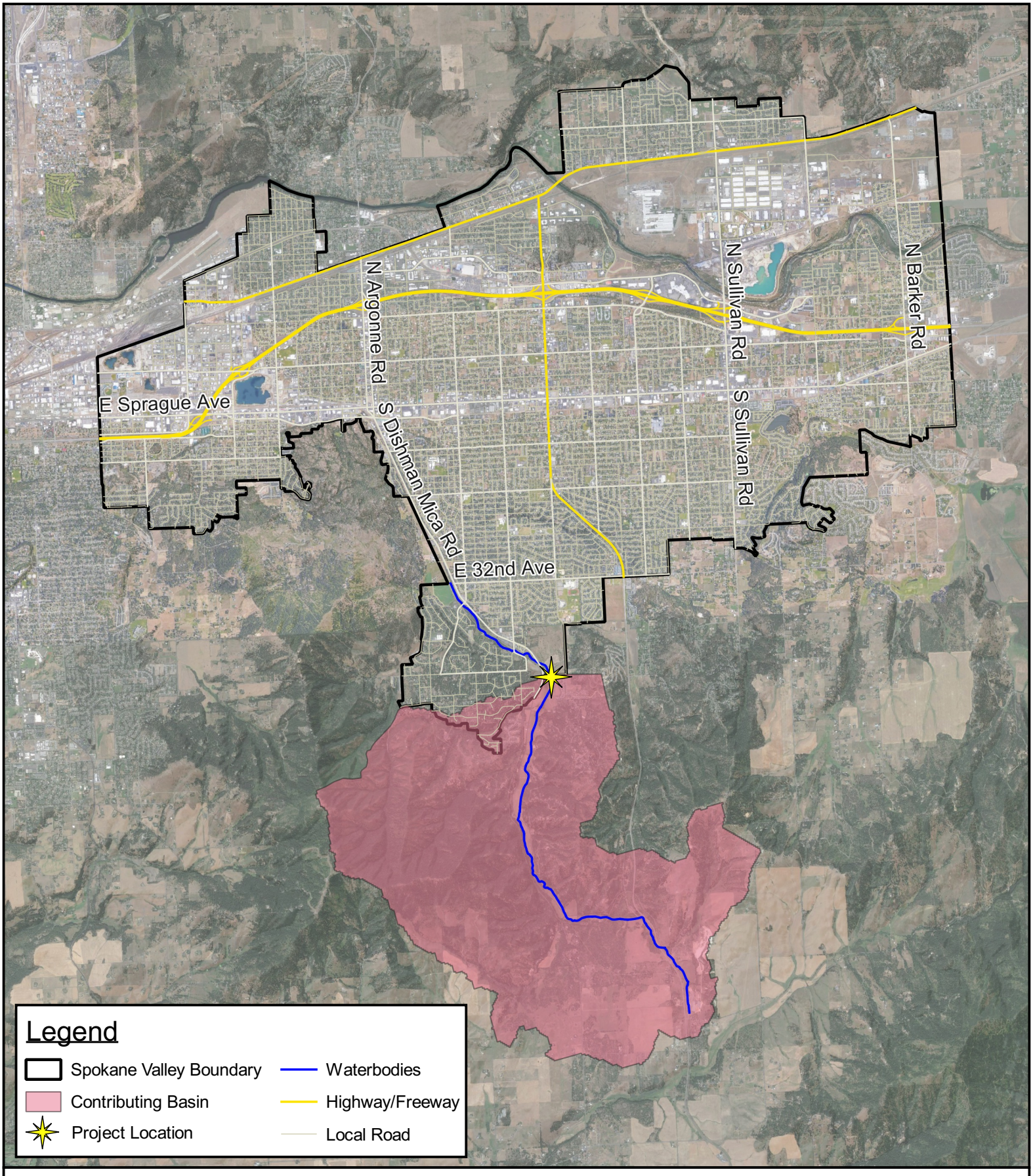
0 100 200 ft

CIP ID: SFM-2
Sloan's Addition Subsurface Flow Management

Stormwater Utility
Program Master Plan

City of Spokane Valley

CIP ID: FM-2	Chester Creek Wetland Overflow Improvements	
Project Location	S Dishman Mica Rd. & E Thorpe Rd.	
Project Type	Flood Mitigation	
Schedule	TBD	
Project Description	According to the *1997 Spokane County Stormwater Utility Chester Creek Watershed Plan* , the Chester Creek Watershed is 23.3 square miles. Approximately 12.5 square miles drain to the Chester Creek, Thorpe Road crossing (area shown in red on attached map). During heavy rainfall events, high flows in Chester Creek overtop the roadway at Thorpe Road. Using a County-owned easement, this project is proposed to replace an existing embankment overflow channel with a concrete embankment overflow channel to mitigate vegetation clogging the current flow path from the existing wetland area. Possible candidate for a FEMA flood mitigation grant. A planning-level cost estimate was developed by City staff and escalated to 2022 dollars. 	
Grant Available?	☐ No ☑ Yes, FEMA Flood Mitigation Assistance Grant	
2022 Projected CIP Cost	Design	$70,000
	Construction	$270,000
	Total	**$340,000**



OSBORN CONSULTING INCORPORATED

N

0 0.75 1.5 mi

CIP ID: FM-2
Chester Creek Wetland Overflow Improvements

Stormwater Utility Program Master Plan

City of Spokane Valley

CIP ID: WQ-1	MS4 Service Area Stormwater Retrofit	
Project Location	City-Wide	
Project Type	Water Quality	
Schedule	Results in Capital Project every permit Cycle (5 years)	
Project Description	It is anticipated that Stormwater Retrofits will be required with the new Ecology NPDES Permit. These retrofits are aimed at improving water quality. This Capital Project sets aside funds for the planning, design and construction of these retrofits. The funding provided will be renewed in a yearly budget.	
Grant Available?	☑ No ☐ Yes, _____	
Annual Budget	**Total**	**$250,000/yr**

CIP ID: O&M-2	Stormwater System (Non-UIC) Replacement Projects	
Project Location	City-Wide	
Project Type	Operations and Maintenance	
Schedule	Annual Budget - Ongoing	
Project Description	With aging stormwater infrastructure, replacement of ineffective structures, pipes and ditches is important to create a proactive approach and prevent subsurface pollutant discharges and surface flooding. The annual budget for this CIP should be used to replace stormwater assets as needed. For reference, a proportionate distribution of the budget given the quantity of each asset type would result in the replacement of approximately 19 catch basins, 295 linear feet (LF) of ditch, 910 LF of pipe and 1 stormwater manhole.	
Grant Available?	☑ No ☐ Yes, _____	
Annual Budget	**Total**	**$200,000/yr**

CIP ID: O&M-3	Spot Drainage Improvements - Small Works Projects	
Project Location	City-Wide	
Project Type	Operations and Maintenance	
Schedule	Annual Budget - Ongoing	
Project Description	Small Works Projects are projects with construction contracts less than $300,000. Examples of small works projects include the installation of a catch basin and drywell, installation of porous asphalt and shoulders, construction of driveway approaches, or installation of a curb and gutter. Small works projects are identified through citizen complaints (qalerts) and sorted by importance.	
Grant Available?	☑ No ☐ Yes, _____	
Annual Budget	**Total**	**$300,000/yr**

APPENDIX K

Capital Improvement Project Averaged Prioritized Scoring

			Operations & Maintenance	Risk of Continued Drainage Issues	Public Benefit	Environmental Benefit	Compliance with Stormwater Requirements	Construction & Schedule Risks	Total Score	Weighted Score
			20%	15%	15%	15%	20%	15%	100%	100%
CIP ID	Project Name	Priority Ranking	3. Project will reduce O&M Cost 2. Project will not impact O&M Cost 1. Project will increase O&M Cost	3. High risk of continued/new drainage issues w/out project 2. Med. risk of continued/new drainage issues w/out project 1. Low risk of continued/new drainage issues w/out project	3. Public sees urgent need for the project, benefitting a large number of rate payers. 2. Public sees moderate need for the project, benefitting a moderate number of rate payers. 1. Public sees little or no need for the project or is opposed to project, benefits a small number of rate payers.	3. Project provides direct improvement of the City's waterbodies, natural/habitat areas or wetlands. 2. Project provides indirect improvement of the City's waterbodies, natural/habitat areas or wetlands. 1. Project does not provide an environmental benefit.	3. Project helps to meet current and future compliance requirements 2. Project helps meet current compliance requirements 1. Project does not help achieve any compliance requirements	3. Project includes straightforward and standard construction approaches, does not require property negotiations and potential for utility conflicts is minimal. 2. Project includes some specialized construction approaches, may require property negotiations and potential for utility conflicts is moderate 1. Project includes complicated and specialized construction approaches, requires property negotiations and potential for utility conflicts is high.		
SFM-1	**Vera Crest Dr Subsurface Flow Management**	**1**	3	3	3	2	3	3	**17**	**92.5**
SWC-2	**Carnahan Rd Conveyance Improvements**	**2**	3	3	3	2	3	2	**16**	**85**
O&M-4	**Sprague-Appleway Swale Modification Project**	**3**	3	1	3	2	3	1	**13**	**62.5**
SWC-1	**S Bowdish Rd Conveyance Improvements**	**4**	2	3	3	1	2	2	**13**	**57.5**
O&M-1	**Pump Station Asset Management Plan (3 locations)**	**5**	3	2	2	1	3	1	**12**	**55**
SWS-1	**Havana Rd Stormwater Separation (2 Locations)**	**6**	2	1	2	1	3	2	**11**	**45**
OE-1	**Ponderosa Dr MS4 Outfall Elimination**	**7**	2	1	1	2	2	1	**9**	**27.5**
FM-1	**Dishman Mica Infiltration Facility Condition Assessment**	**T-9**	2	2	2	1	1	1	**9**	**25**
SFM-3	**Heather Park Subsurface Flow Management**	**T-9**	2	2	1	1	1	2	**9**	**25**
SFM-2	**Sloan's Addition Subsurface Flow Management**	**10**	2	1	1	1	1	2	**8**	**17.5**
FM-2	**Chester Creek Wetland Overflow Improvements**	**11**	2	1	1	1	1	1	**7**	**10**

Notes:
SWC = Surface Water Conveyance
SFM = Subsurface Flow Management
O&M = Operations
FM = Flood Mitigation
OE = MS4 Outfall Elimination
SWS= Stormwater Separation
WQ = Water Quality

APPENDIX L

UIC Retrofit Program Unit BMP Cost

UIC Unit Retrofit Cost Estimate Based on Presumptive Approach			
Level 4 - Remove Solids and Oils - Filterra			
	Sprague Ave Unit Retrofit Cost	**Cost Increase**	**Unit Retrofit Cost**
	$ 48,700.00		
Percent Increase for Reduction in Material		50%	$ 75,926.79
Percent Increase for Immediate Rise in Material Cost		6%	
		Subtotal	$ 75,926.79
		Contingency (15%)	$ 11,389.02
		Estimated Total (Rounded)	**$ 87,400.00**

Assumptions:

Cost is to retrofit one drywell with a Filterra system to meet Enhanced/Oil treatement requirements per the SWMMEW

Cost is based off Sprague Avenue SW Improvement project costs (produced in early 2022)

Cost does not include purchase of additional property or ROW

Unit cost was developed for estimating the programmatic cost of high priority retrofits and should not be used at a project specific level

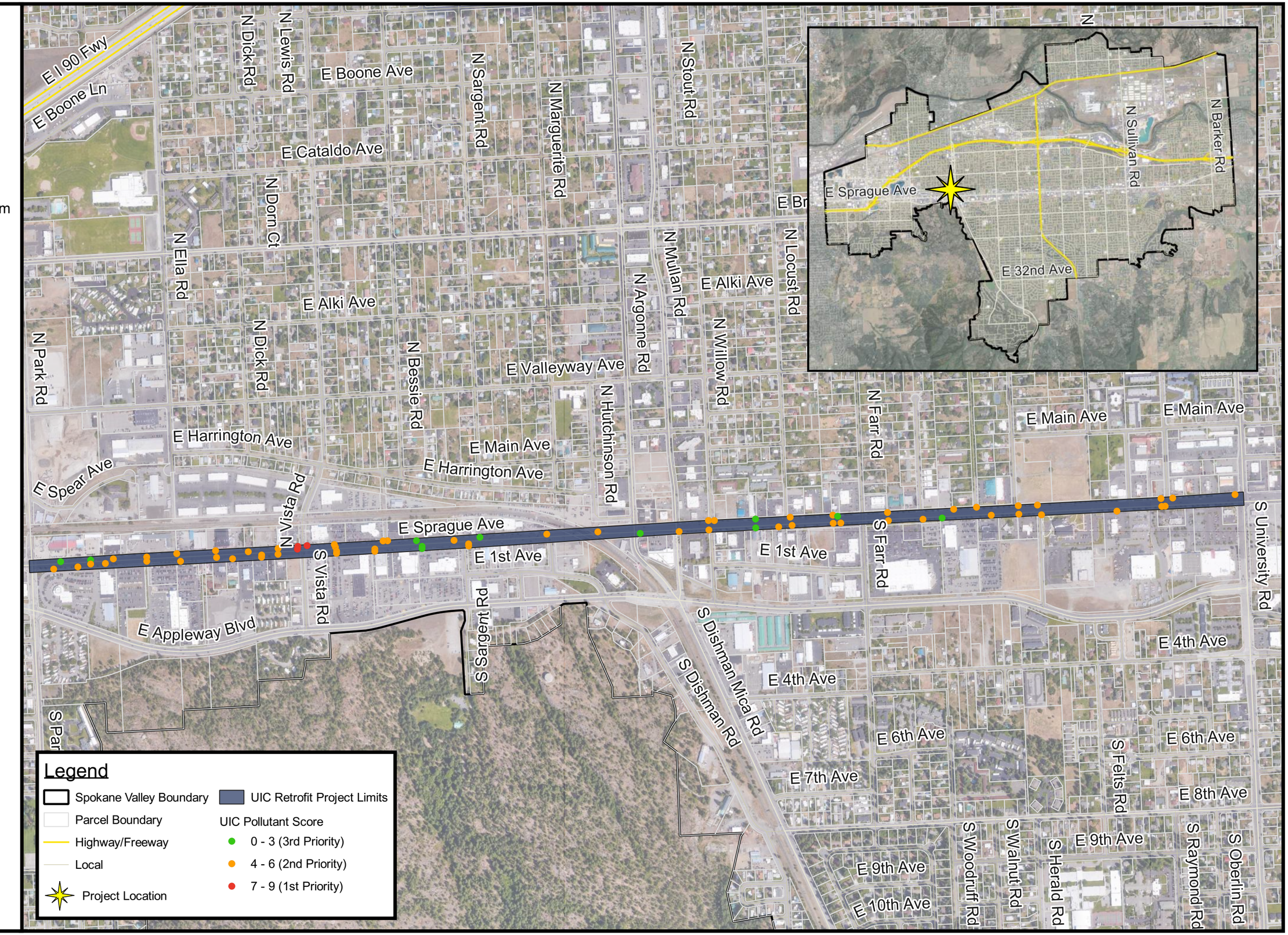
APPENDIX M

UIC Retrofit Project Fact Sheets and Maps

UIC ID: 1	Sprague Avenue Stormwater Retrofits	
Project Location	E Sprague Ave. from N University Rd. to N Park Rd.	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	Ecology grant funding was awarded for the design and construction of water quality BMPs to collect and treat runoff before discharging to UICs, or infiltrating along Sprague Avenue. In 2021 the City hired a consultant to develop a concept design, cost estimate, and design report for the improvements. The project proposes to retrofit approximately 70 UICs along Sprague Avenue with Filterras and bioinfiltration swales to meet current water quality standards. Ecology approved the conceptual design and report in May 2022, however, due to recent escalations in material and construction costs, the project construction cost was found to be too high to continue the project through the Ecology grant funding source. Additional funds will be needed to finalize design and construct the improvements. The preliminary construction cost estimate developed in the 2022 Sprague Design Report (OCI, 2022) was utilized for the cost of this project. 	
Grant Available?	☑ No ☐ Yes	
2022 Projected UIC Cost	Design	$130,000
	Construction	$5,118,000
	Total	**$5,248,000**

UIC ID: 1
Sprague Ave SW Retrofits

Stormwater Utility Program
Master Plan

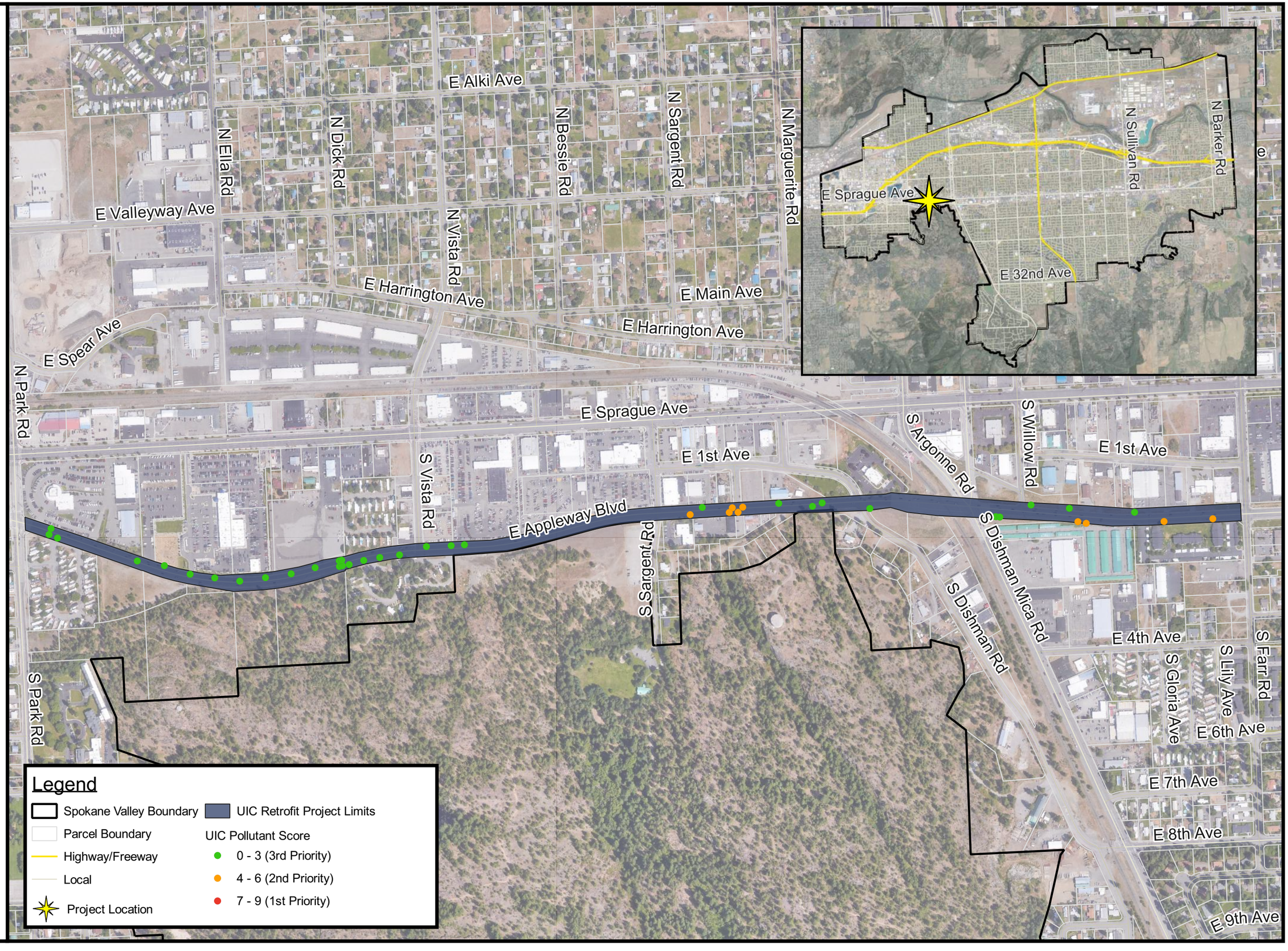


OSBORN CONSULTING INCORPORATED

UIC ID: 2	Appleway Stormwater Improvements - Phase 3	
Project Location	E Appleway Blvd. from N Park Rd. to N Farr Rd.	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	Many high priority for retrofit UICs are located along Appleway Boulevard, capturing stormwater runoff and discharging it directly into the ground with no pretreatment. This project will be the third phase of stormwater retrofits along Appleway Boulevard and will provide water quality treatment via bioinfiltration swales between the roadway and sidewalk. This project stretches approximately 7,235 feet and proposes to retrofit approximately 20 drywells. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$286,470
	Construction	$1,623,330
	Total	**$1,909,800**

UIC ID: 2
Appleway SW Improvements Phase 3

Stormwater Utility Program
Master Plan

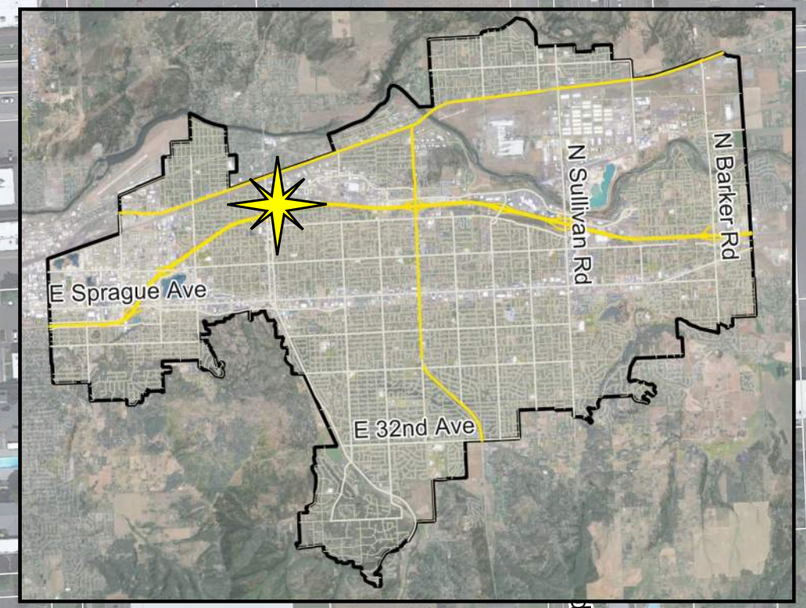


OSBORN CONSULTING INCORPORATED

UIC ID: 3	Argonne Stormwater Retrofits	
Project Location	N Argonne Rd. from I-90 to E Montgomery Ave. Intersection	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	UICs along Argonne Road receive direct discharge of stormwater runoff with little to no pretreatment. This project was identified from the UIC Assessment conducted by the City. The project proposes to retrofit approximately four existing UICs with water quality treatment BMPs, additionally, 1,500 feet of roadway improvements may occur in conjuction with this project to save on construction costs and distribute project costs interdepartmentally. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$34,260
	Construction	$194,140
	Total	**$228,400**

UIC ID: 3
N Argonne Rd
SW Retrofits

Stormwater Utility Program
Master Plan



E Montgomery Ave
E Mansfield Ave
N Marguerite Rd
N Hutchinson Rd
E Knox Ave
N Dale Rd
N Argonne Rd
E Shannon Ave
E Michielli Pl
N Sargent Rd
N Mullan Rd
E I 90 W287 OFF Ramp
E I 90 Fwy
E I 90 Fwy
E I 90 E287 ON Ramp
E Nora Ave
N Locust Rd

N

0 150 300 ft

Legend

- Spokane Valley Boundary
- Parcel Boundary
- Highway/Freeway
- Local
- Project Location
- UIC Retrofit Project Limits

UIC Pollutant Score

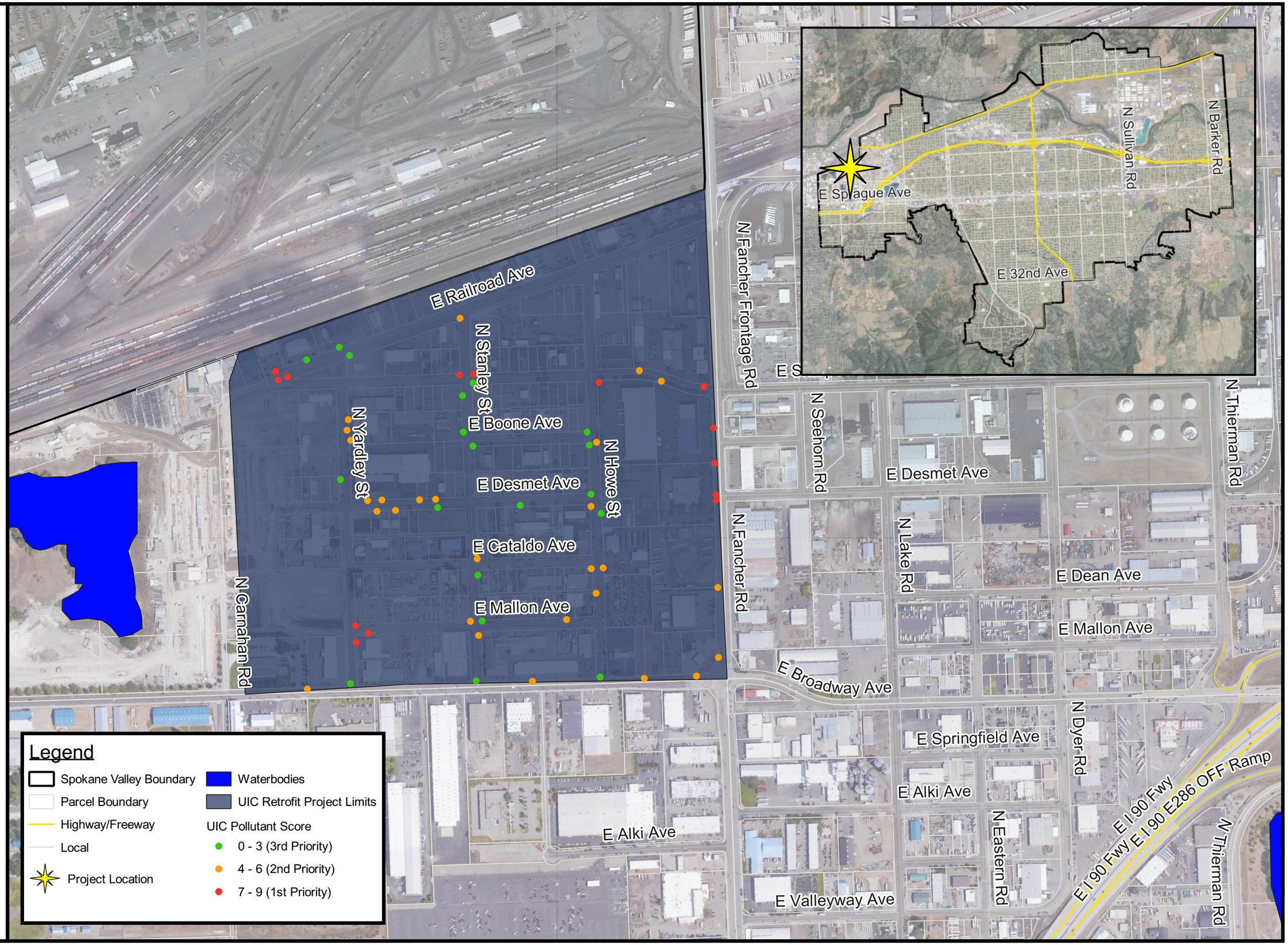
- 0 - 3 (3rd Priority)
- 4 - 6 (2nd Priority)
- 7 - 9 (1st Priority)

OSBORN CONSULTING INCORPORATED

UIC ID: 4	Northwest Yardley Stormwater Retrofits	
Project Location	Areas Northwest of Fancher Rd. and Broadway Ave.	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	A number of locations have ongoing drainage problems due to narrow pavement and truck parking areas along existing roadways. The project proposes to retrofit approximatey 16 existing UICs with water quality treatment BMPs and provide runoff control to address existing drainage problems. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$209,760
	Construction	$1,188,640
	Total	**$1,398,400**

UIC ID: 4
NW Yardley SW Retrofits

Stormwater Utility Program
Master Plan



N
0 300 600 ft

Legend

- Spokane Valley Boundary
- Parcel Boundary
- Highway/Freeway
- Local
- Project Location
- Waterbodies
- UIC Retrofit Project Limits

UIC Pollutant Score

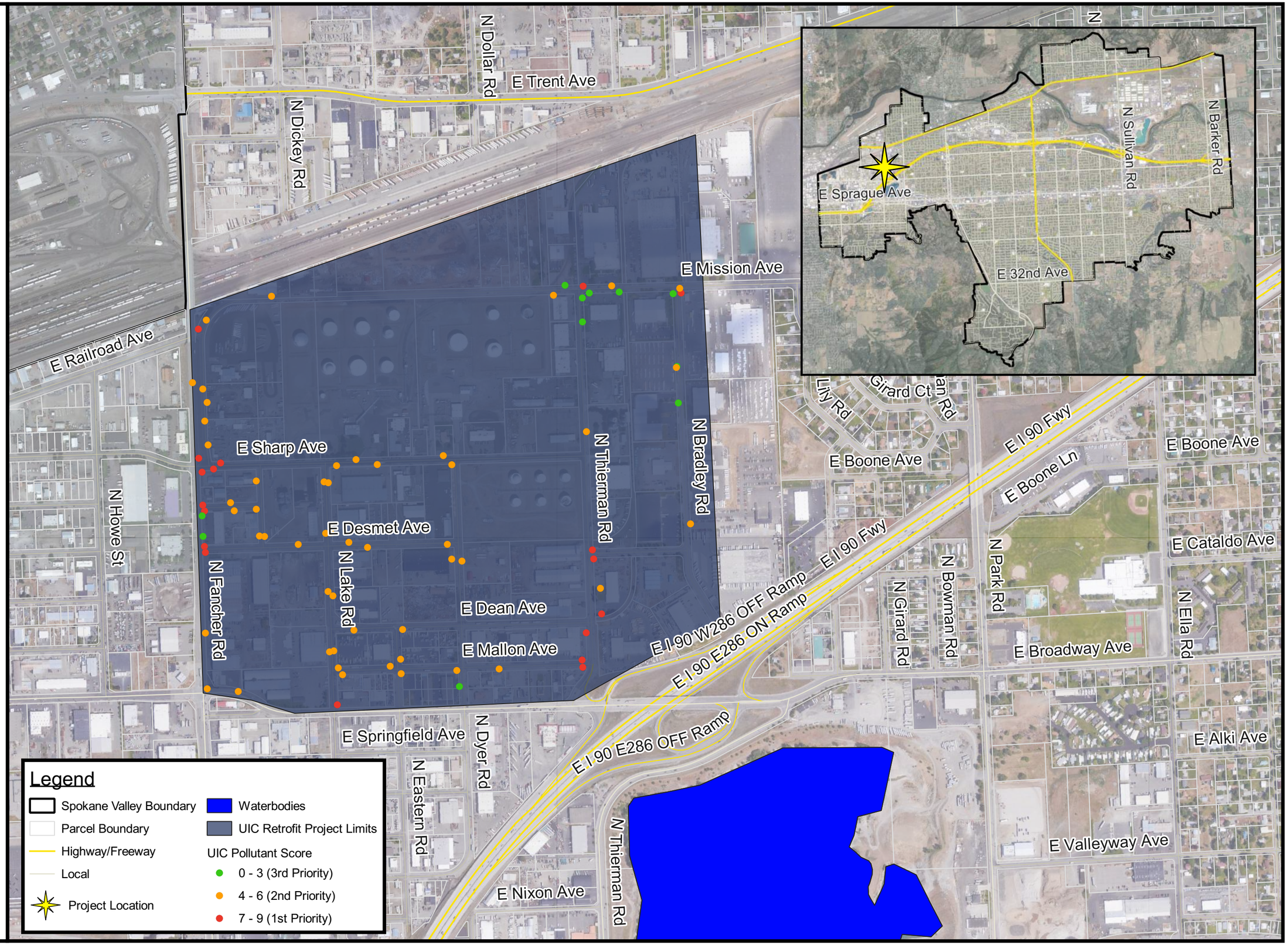
- 0 - 3 (3rd Priority)
- 4 - 6 (2nd Priority)
- 7 - 9 (1st Priority)

OSBORN CONSULTING INCORPORATED

UIC ID: 5	Northeast Yardley Stormwater Retrofits	
Project Location	Areas East of Fancher Rd. and North of I-90	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	A number of locations have ongoing drainage problems due to narrow pavement and truck parking areas along existing roadways. The project proposes to retrofit approximately 80 existing UICs with water quality treatment BMPs and provide runoff control to address existing drainage issues. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$603,060
	Construction	$5,427,540
	Total	**$6,030,600**

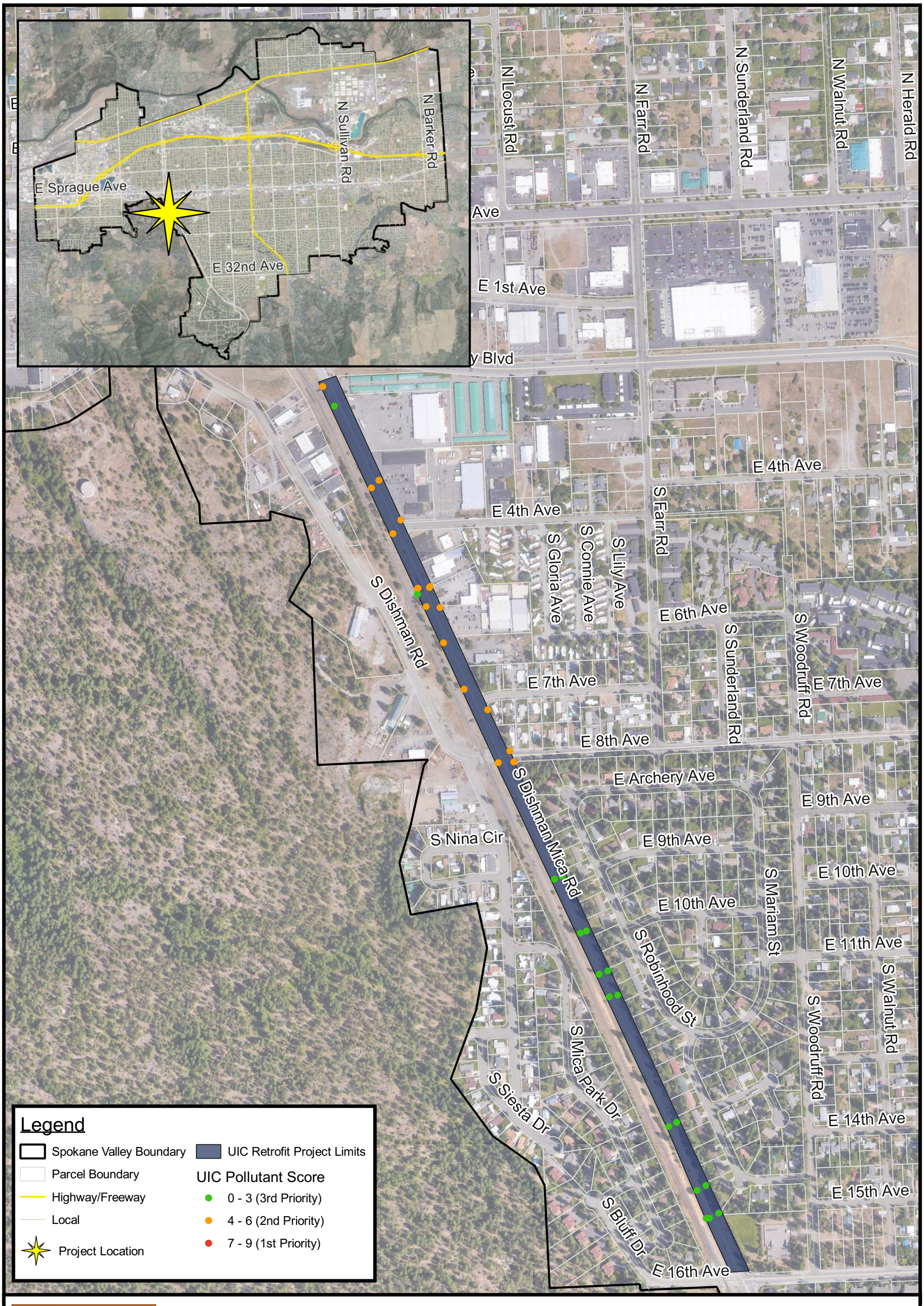
UIC ID: 5
NE Yardley
SW Retrofits

Stormwater Utility Program
Master Plan



OSBORN CONSULTING INCORPORATED

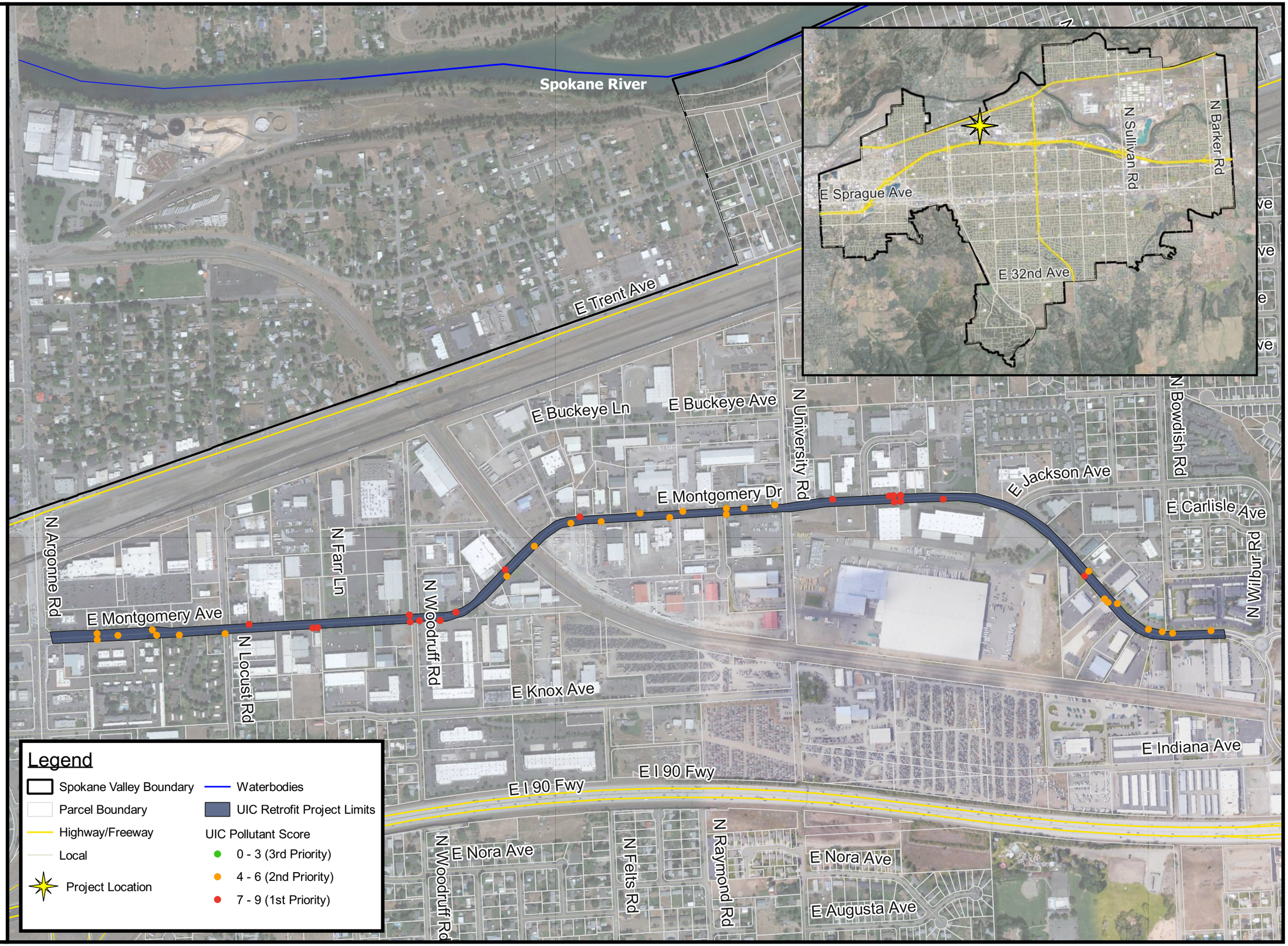
UIC ID: 6	Dishman-Mica Stormwater Retrofits	
Project Location	S Dishman-Mica Rd. from E 16th Ave. to E Appleway Blvd.	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	Heavy winter sanding, high traffic, and no upstream treatment has lead to the clogging and failure of UICs along Dishman-Mica Road. The failing UICs cause intermittent flooding which poses a significant safety hazard for high speed traffic. This project proposes to remove and replace existing UICs and add upstream water quality and flow control BMPs to protect groundwater and address drainage issues. Approximately 34 UICs will be retrofitted and/or re-installed. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$182,240
	Construction	$1,640,160
	Total	**$1,822,400**


E Sprague Ave
N Sullivan Rd
N Barker Rd
E 32nd Ave
N Locust Rd
N Farr Rd
N Sunderland Rd
N Walnut Rd
N Herald Rd
E 1st Ave
E 4th Ave
S Dishman Rd
S Gloria Ave
S Connie Ave
S Lily Ave
S Farr Rd
E 6th Ave
S Sunderland Rd
S Woodruff Rd
E 7th Ave
E 8th Ave
E Archery Ave
E 9th Ave
S Nina Cir
S Dishman Mica Rd
E 10th Ave
S Robinhood St
S Mica Park Dr
S Siesta Dr
S Bluff Dr
E 11th Ave
E 14th Ave
E 15th Ave
E 16th Ave
Legend
Spokane Valley Boundary
Parcel Boundary
Highway/Freeway
Local
Project Location
UIC Retrofit Project Limits
UIC Pollutant Score
0 - 3 (3rd Priority)
4 - 6 (2nd Priority)
7 - 9 (1st Priority)
OSBORN CONSULTING INCORPORATED
N
0
500 ft
UIC ID: 6
Dishman-Mica SW Retrofits
Stormwater Utility Program Master Plan
City of Spokane Valley

UIC ID: 7	Montgomery Stormwater Retrofits	
Project Location	E Montgomery Dr. from N Argonne Rd. to E Mansfield Rd.	
Project Type	Aquifer Protection - UIC Retrofit	
Schedule	TBD	
Project Description	Many high priority for retrofit UICs are located along Montgomery Avenue, capturing stormwater runoff and discharging it directly into the ground with no pretreatment. This project was identified as a high priority from the UIC Assessment conducted by the City. The project proposes to retrofit approximately 44 existing UICs with water quality treatment BMPs. Design has not been completed for this project. Planning-level cost estimate developed in 2022 dollars. 	
Grant Available?	☐ No ☑ Yes	
2022 Projected UIC Cost	Design	$345,400
	Construction	$3,108,600
	Total	**$3,454,000**

CIP ID: 7
Montgomery SW Retrofits

Stormwater Utility Program Master Plan



OSBORN CONSULTING INCORPORATED

APPENDIX N

UIC Retrofit Project Detailed Breakdown

Project Name	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
Sprague Ave.	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	28	$ 2,447,200.00	157	$ 15,587.26
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	42	$ 2,251,200.00	134	$ 16,850.30
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**70**	**$ 4,698,400.00**	**291**	
NW Yardley Area	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	16	$ 1,398,400.00	95	$ 14,720.00
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	0	$ -	0	
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
				16	**$ 1,398,400.00**	**95**	
Montgomery Rd.	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	34	$ 2,971,600.00	228	$ 13,033.33
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	9	$ 482,400.00	41	$ 11,765.85
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**43**	**$ 3,454,000.00**	**269**	
Dishman-Mica Rd.	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	0	$ -	0	#DIV/0!
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	34	$ 1,822,400.00	115	$ 15,846.96
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**34**	**$ 1,822,400.00**	**115**	
	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
Argonne Rd.	Level 4 (Filterra 100%)	$ 87,400.00	High	2	$ 174,800.00	12	$ 14,566.67
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	1	$ 53,600.00	4	$ 13,400.00
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**3**	**$ 228,400.00**	**16**	
Appleway Blvd.	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	1	$ 87,400.00	6	$ 14,566.67
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	34	$ 1,822,400.00	88	$ 20,709.09
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**35**	**$ 1,909,800.00**	**94**	
NE Yardley Areas	Retrofit Type	Unit Cost	Ecology Pollutant Loading	Number of Drywells Retrofit	Total Cost	Point Reduction	Average Cost Per Point
	Level 4 (Filterra 100%)	$ 87,400.00	High	69	$ 6,030,600.00	435	$ 13,863.45
	Level 3 (StormTech/Filterra 80%)	$ 53,600.00	Medium	0	$ -	0	#DIV/0!
	Level 2 (CB w/ Spill Protection)	$ 27,100.00	Low				
	Level 1 (CB only)	$ 25,090.00	Insignificant				
			Project Totals:	**69**	**$ 6,030,600.00**	**435**	

APPENDIX O

Stormwater Utility Rate Study

City of Spokane Valley

Stormwater Utility Rate Study

FINAL REPORT

December 2022

Washington
7525 166th Avenue NE, Ste. D215
Redmond, WA 98052
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Oregon
5335 Meadows Road, Ste. 330
Lake Oswego, OR 97035
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FCS GROUP
Solutions-Oriented Consulting

TABLE OF CONTENTS

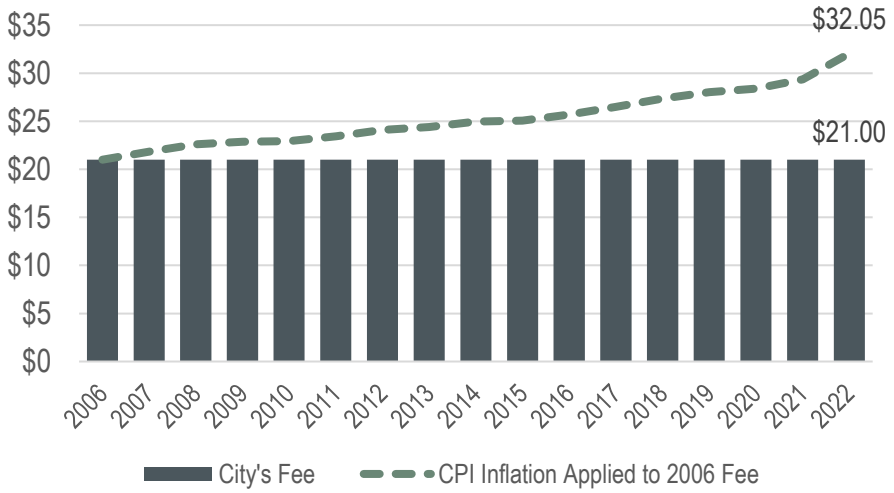
Section I. INTRODUCTION

Utility Rate and Inflation

The City implemented an annual stormwater utility fee of $21 per equivalent residential unit (ERU) in 2006; it has not increased since that time. **Exhibit 1** compares that fee against what that fee would have been if annual inflationary adjustments had been applied. The fee would need to be roughly $32 in 2022 to have a similar amount of buying power as it did in 2006.

Since 2006, the utility has faced significant cost inflation and development. While new development does result in new customers who pay the annual rate, new development may require additional services and can also result in additional costs for the utility to build and maintain the infrastructure that serves the new development. Additionally, the City has gone through three iterations of the National Pollutant Discharge Elimination System (NPDES) Municipal stormwater permit (2007, 2014, and 2019). Each permit has resulted in additional regulatory requirements for the City's stormwater program.

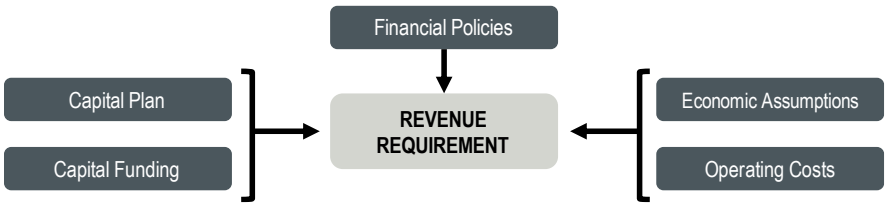
Exhibit 1: City's Annual Stormwater Fee vs. Consumer Price Index (CPI) Inflation



Rate Study

The main purpose of this rate study is to develop a funding plan ("revenue requirement") for the City's stormwater utility for the 2022-2036 study period. The revenue requirement identifies the total rate revenue needed to fully fund the utility on a standalone basis, considering operating and maintenance expenditures, capital funding needs identified in the City's capital plan, and identified fiscal policies. **Exhibit 2** shows the general methodology of the rate study process.

Exhibit 2: Revenue Requirement Overview



This report documents the rate impacts associated with two levels of service (LOS): m*inimum required* and *proactive*. Those levels of service are described in more detail in the body of the 2022 Stormwater Utility Program Master Plan (OCI 2022). In each LOS, once the initial adjustment has been made for 2023, it is recommended that the City apply annual inflationary adjustments to the rate. The two following exhibits assume increases of 3% per year starting in 2024. The forecast goes through the end of 2036 (as do the 3% annual increases), but the tables show results through 2030 due to space limitations.

Level of Service: Minimum Required

The minimum level of service requires increasing the annual rate per ERU from $21.00 in 2022 to $44.52 in 2023, which is an increase of roughly $2 per month. This level of service funds approximately $23.3 million in capital projects inflated to the year of construction (2022-2036) and provides funding for up to 4.4 additional FTEs for a total of 8.5 total stormwater FTEs.

Exhibit 3: Minimum Required Level of Service: Annual Rate Adjustments

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate / ERU	$21.00	$44.52	$45.86	$47.23	$48.65	$50.11	$51.61	$53.16	$54.75
Annual Increase		$23.52	$1.34	$1.38	$1.42	$1.46	$1.50	$1.55	$1.59
Monthly Increase		$1.96	$0.11	$0.11	$0.12	$0.12	$0.13	$0.13	$0.13

Level of Service: Proactive

The proactive level of service requires an increase to $57.96 per year per ERU in 2023, which is an increase of roughly $3 per month. This level of service funds approximately $35.0 million in capital projects inflated to the year of construction (2022-2036) and provides funding for up to 4.1 additional FTEs above the minimum required LOS for a total of 12.6 total stormwater FTEs.

Exhibit 4: Proactive Level of Service: Annual Rate Adjustments

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate / ERU	$21.00	$57.96	$59.70	$61.49	$63.33	$65.23	$67.19	$69.21	$71.28
Annual Increase		$36.96	$1.74	$1.79	$1.84	$1.90	$1.96	$2.02	$2.08
Monthly Increase		$3.08	$0.14	$0.15	$0.15	$0.16	$0.16	$0.17	$0.17

Section II. FISCAL POLICIES

The basic framework for evaluating utility revenue needs includes sound fiscal policies. Several policy topics are important to consider further as part of managing the finances of the City, including operating reserves, capital reserves, and rate funded capital. While the City does not distinguish between operating reserves and capital reserves in its fund structure, existing reserves are allocated between operating and capital for purposes of the rate forecast.

When evaluating reserve levels and objectives, it is important to recognize that the value of reserves lies in their potential use. A reserve strategy that deliberately avoids any use of reserves negates their purpose. The fluctuation of reserve levels may indicate that the system is working, while the lack of variation over many years strongly suggests that the reserves are, in fact, unnecessary.

Operating Reserve

An operating reserve is designed to provide a liquidity cushion; it protects the utility from the risk of short-term variation in the timing of revenue collection or payment of expenses. Industry practice for utility operating reserves typically ranges from 30 days (8%) to 120 days (33%) of operating expenses, with the lower end more appropriate for utilities with stable revenue streams and the higher end of the range more appropriate for utilities with significant seasonal or consumption-based fluctuations. The most common operating reserve target for stormwater utilities with annual billing is 120 days.

Recommended Policy: Per the City's adopted 2022 budget, the general fund balance must be sufficient to meet roughly six months of recurring expenditures. To be consistent with the City's approach for the general fund, it is reasonable that the stormwater utility also strives to achieve a year-end minimum balance target of 180 days (50%) of total annual operating expenditures. This equates to $1.1 million, based on the 2022 stormwater operating budget of approximately $2.3 million.

Capital Reserve

This reserve provides a source of emergency funding for unexpected asset failures or other unanticipated capital needs. This capital reserve policy is not intended to guard against catastrophic system failure or extreme acts of nature. Minimum balances for capital reserves are often based on a percentage (commonly 1% to 2%) of the original cost of utility fixed assets or an amount determined sufficient to fund an emergency capital project or equipment failure. Capital reserves larger than these amounts may be prudent if the City is saving for future capital projects that cannot be funded with same-year rate revenues.

Recommended Policy: Achieve a minimum balance target sufficient to fund a small emergency project (assumed to be $300,000 based on the City's *Spot Drainage Improvements – Small Works Projects* annual cost estimate in the proactive level of service). This target is in addition to the 180-day operating target reserve.

Debt Related Policies

The City does not currently have any stormwater-related debt. Based on discussions with City staff, it is their preference that the stormwater utility continues to cash-fund capital projects during the rate study period (2022-2036). This is consistent with goal number five in the City Manager's 2022 budget message which notes that the City will strive to minimize debt with a pay as you go philosophy. However, if the City were to ever issue debt in the future, it may be prudent to coordinate with bond counsel to discuss topics and policies such as debt service coverage targets and debt reserves (if applicable).

Rate Funded System Reinvestment (Rate Funded Capital)

Rate funded system reinvestment is the funding of long-term infrastructure replacement needs through a regular (annual) and predictable rate provision. Most commonly, utilities that have addressed replacement funding needs have used historical (original cost) depreciation expense as the basis for a reasonable level of reinvestment in the system.

Recommended Policy: The City desires to continue to cash-fund its capital program. Therefore, the utility should strive to generate revenues to cover both operating costs and the annual average capital program.

Summary of Fiscal Policies

Exhibit 5 provides a summary of the recommended fiscal policies for the City.

Exhibit 5: Summary of Fiscal Policies

Policy	Recommended Target
Operating Reserve	Target $1.1 million (180 days of operating expenses) based on the 2022 budget; this target increases as the City's operating costs increase
Capital Reserve	Target enough to fund an emergency project; assumed to be roughly $300,000
Operating + Capital Reserve	$1.4 million in 2022
Rate Funded Capital	Set rates to allow the utility to cash fund its capital program after taking into account available cash reserves and or grants

Section III. Revenue Requirement

As previously mentioned, the main purpose of the revenue requirement analysis is to develop a funding plan ("revenue requirement") for the 2022-2036 study period. For each level of service, the revenue requirement identifies the total rate revenue needed to fully fund the utility on a standalone basis considering current financial obligations including operating expenditures, policy-driven commitments, and future capital project needs. Rate increases are applied "across-the-board" – that is, it is assumed that each charge on the rate schedule increases by the same percentage, which maintains the existing rate structure.

Economic & Inflation Factors

The operating and maintenance expenditure forecast largely relies on the City's 2022 budget. The line items in the budget are then adjusted each year by utilizing one of the following applicable factors:

- **General Cost Inflation**. Assumed to be 5.0 percent for 2023, and 3.0 percent each year thereafter based on both the Washington State Economic & Revenue Forecast Council projection for the Consumer Price Index and the recent historical performance of the Seattle-Tacoma-Bellevue Consumer Price Index. [Note on inflation: In the short term, the U.S. economy is experiencing a higher-than-historical level of inflation, which is influenced by pandemic conditions, supply chain issues, and reduced labor force participation. The inflation assumptions for this forecast are raised accordingly for the close future but returned to normal over the long term.]
- **Construction Cost Inflation.** Assumed to be 3.5 percent per year based on the Engineering News-Record's Construction Cost Index (20-City Average).
- **Taxes.** State Business and Occupation tax rate of 1.75 percent (taxable revenue goes above the $1.0 million threshold).
- **Personnel Cost Inflation.** Based on Employment Cost Indices (U.S. Bureau of Labor Statistics), experience with other stormwater utilities, and discussions with City staff.
  - Labor inflation: assumed to be 5.0 percent for 2023, and 3.0 percent each year thereafter.
  - Benefits inflation: assumed to be 5.5 percent for 2023, and 3.5 percent each year thereafter.
- **Cost per Additional Full-Time Equivalent (FTE).** Based on existing personnel costs and FTE counts, additional staffing requirements identified in each level of service are assumed to cost $136,000 per FTE (2022 $) – inclusive of wages and benefits.
- **Fund Earnings.** Assumed to be 0.5 percent per year based on recent earnings reports from the State's Local Government Investment Pool (LGIP) at the time of the analysis.
- **Customer Account Growth.** According to equivalent residential unit records from the City spanning 2007-2022, the City has experienced annual growth of 1.3%. The forecast assumes a 1.0% annual customer growth rate per year to be conservative.

Fund Balances

The 2022 starting cash balance for the stormwater utility fund was approximately $1.4 million. The stormwater utility does not have separate operating and capital reserve funds; however, they have

been split into two separate 'buckets' in the analysis to model the reserves and to be able to assign operating resources to operating expenditures and capital resources to capital expenditures. The current cash balance for Fund 403, the Aquifer Protection Area, was not included in this analysis.

Existing Debt Obligations

The City does not currently have any stormwater-related debt. Based on discussions with City staff, it is their preference that the utility continues to cash-fund capital projects during the study period. However, if the City were to ever issue debt, it may be prudent to consider the following:

- While cash funding might be cheaper in the long run because there is no interest cost, debt funding may be practical in some situations since it allows for the payment of costs over an extended period. Utilizing debt might also allow the City to complete projects more quickly, thereby avoiding some inflation costs.
- Using debt to spread the cost over time also promotes "intergenerational equity," ensuring that future customers pay for their fair share of system costs.
- The City's ability to meet debt service coverage and other debt-related requirements may limit the amount of debt that it can issue.
- Excessive amounts of outstanding debt can affect a utility's credit rating (and its ability to secure low-interest debt).

Future Programmatic Requirements

Evergreen StormH20 worked with City staff to develop a prioritized set of operating program requirements for each level of service, which is summarized below. It is assumed that these costs would begin in 2023, except for the *2024-2029 Anticipated MS4 Permit Requirements*, which would begin in 2024. These costs are in addition to the City's 2022 adopted budget and are assumed to be annual costs. The incremental cost represents the total of the categories for each level of service. The total cost is the cumulative cost based on the level of service. As the proactive level of service is in addition to the minimum required, the total cost is the combined incremental cost for both. Costs for CIPs, UIC Program, and Small Works are included as Capital Expenditures, as discussed below.

Exhibit 6: Annual Additional Operating Costs by Level of Service (2022 $)

Category	Minimum Required LOS	Proactive LOS
2019-2024 MS4 EWA Phase II Permit Section	$162,000	$0
2024-2029 Anticipated MS4 Permit Requirements	$73,000	$0
Underground Injection Control (UIC) Rule	$0	$0
Stormwater Elements Not Regulated	$89,000	$65,000
Incremental	**$324,000**	**$65,000**

Category	Minimum Required LOS	Proactive LOS
Total	**$324,000**	**$389,000**

Future Staffing Requirements

Evergreen StormH20 also worked with City staff to develop a prioritized set of staffing requirements for each level of service, summarized below. Except for the 0.46 FTE related to the *2024-2029 Anticipated MS4 Permit Requirements* category, it is assumed that these staffing requirements would come online in 2023. Background information on these staffing requirements can be found in the body of the master planning document.

- Currently Funded by Stormwater Utility: The stormwater utility currently funds 4.13 FTEs.
- Currently Funded by General Fund: The general fund currently pays for 1.49 FTEs that perform stormwater-related duties. These are assumed to be funded by the stormwater utility in both levels of service; a total of 5.62 FTEs.
- Minimum Required LOS. 2.92 additional FTEs; a total of 8.54 stormwater FTEs.
- Proactive LOS: 4.05 additional FTEs; a total of 12.59 stormwater FTEs.

Exhibit 7: Staffing Requirements by Level of Service

Category	Currently Funded by Stormwater Utility	Currently Funded by General Fund	Minimum Required LOS	Proactive LOS
2019-2024 MS4 EWA Phase II Permit Section	2.00	0.87	1.04	0.00
2024-2029 Anticipated MS4 Permit Requirements	0.00	0.00	0.46	0.00
Underground Injection Control (UIC) Rule	0.08	0.00	0.15	0.09
Stormwater Elements Not Regulated	2.05	0.62	1.27	3.96
Incremental	**4.13**	**1.49**	**2.92**	**4.05**
Total	**4.13**	**5.62**	**8.54**	**12.59**

In addition to the staffing requirements noted in **Exhibit 7**, an additional 0.1 FTE per year is incorporated into the forecast beginning in 2023, to better enable the City to meet regulations.

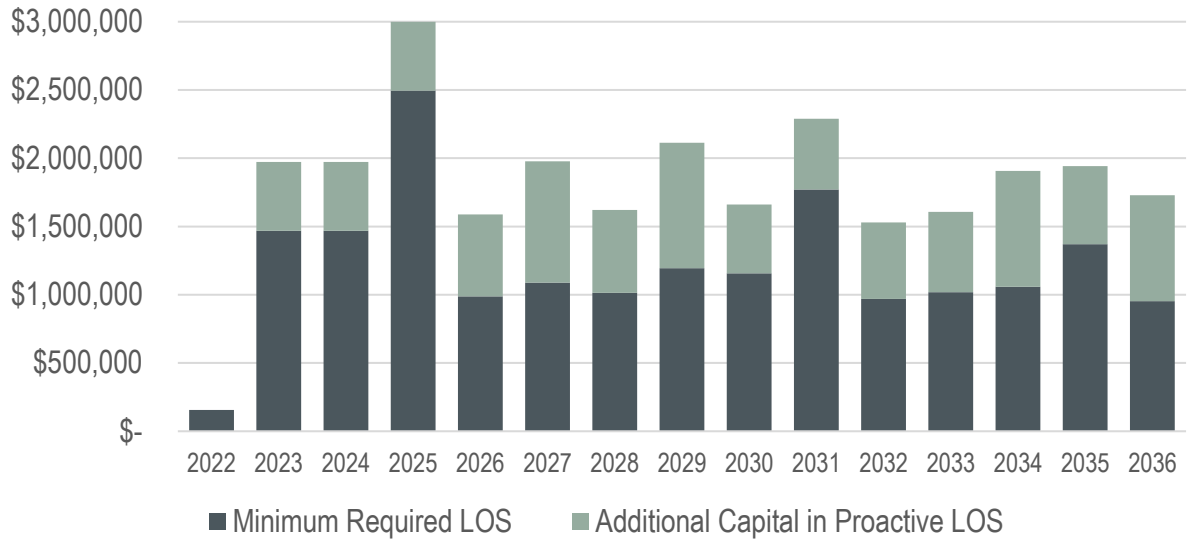
Capital Expenditures

Osborn Consulting worked with City staff to develop a prioritized capital program and project list for each level of service. Based on input from Osborn and City staff, these capital obligations were

assumed to be completed over 15 years, as shown in **Exhibit 8**. Summary notes related to the capital plan are provided below for the two levels of service:

- **LOS Minimum Required**: The 2022-2036 CIP totals $18.2 million ($1.2 million per year) in 2022 dollars and $23.3 million with forecasted inflation ($1.6 million per year).
- **LOS Proactive:** The 2022-2036 CIP totals $27.1 million ($1.8 million per year) in 2022 dollars and $35.0 million with forecasted inflation ($2.3 million per year).

Exhibit 8: Annual Capital Expenditures by LOS (2022 $)



Revenue Requirement for **Minimum Required LOS**

The minimum level of service requires increasing the annual rate per ERU from $21.00 in 2022 to $44.52 in 2023, which is an increase of roughly $2 per month. **Exhibit 9** graphically represents the revenue requirement forecast through 2036. The stacked columns represent the costs and obligations of the utility such as operating expenses and annual rate revenue earmarked for capital projects.

The solid black line represents revenue at existing rates and the dashed line shows forecasted revenue with rate increases. Additional observations are provided above each bar: the percentage increase, the annual single-family rate, and the annual dollar increase.

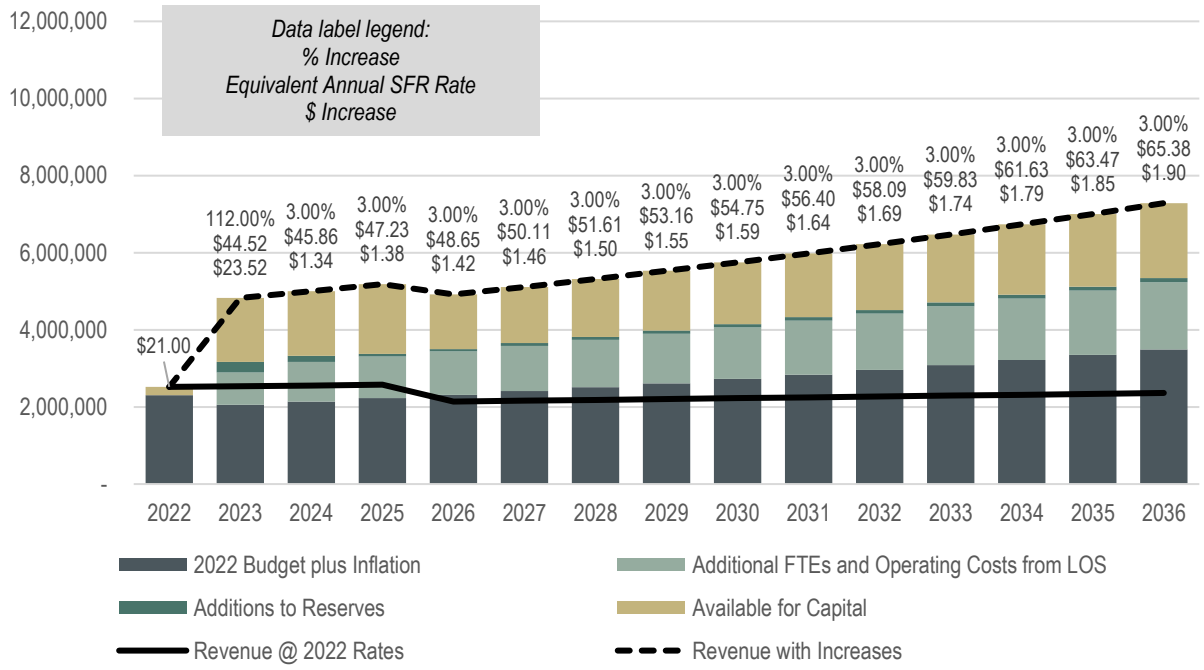
- Solid black line: Revenue at existing rates.
  - » Stormwater rate revenue is expected to be roughly $2.0 million in 2022 and is expected to grow 1.0% per year with customer growth. This line also includes annual revenue of $460,000 from the Aquifer Protection Area (APA) fee, until it is assumed to sunset in 2025.
- Dashed black line: Revenues with rate increases.
  - » Rate revenue must increase to allow the utility to cover its existing financial obligations while also funding capital improvement projects. These rate increases start in 2023.
- Dark blue bar: 2022 Budget plus Inflation
  - » Operating expenses are based on the adopted 2022 budget and increase with the annual cost escalation assumptions previously discussed.
- Green bar: Additional FTEs and Operating Costs from LOS.

  - » The minimum required LOS incorporates funding for the 1.49 stormwater FTEs currently being paid for by the general fund, plus 2.92 FTEs directly associated with the minimum required LOS, for a total of 4.41 FTEs (in addition to the 4.13 FTEs already funded by the stormwater program). It also adds recurring programmatic costs of about $324,000 per year, plus inflation as shown in **Exhibit 6**.

- Gold bar: Cash available for capital (i.e., rate funded capital).
  - » In 2023, roughly $1.7 million is available for rate funded capital. With rate increases, this amount is projected to increase to $1.9 million by 2036.

- Dark green bar: Additions to reserves.
  - » As operating costs increase over time, a small amount each year is assumed to be added to reserves to keep up with the operating reserve target.

Exhibit 9: Minimum Required LOS: Annual Revenue Requirement Forecast 2022-2036



Revenue Requirement for **Proactive LOS**

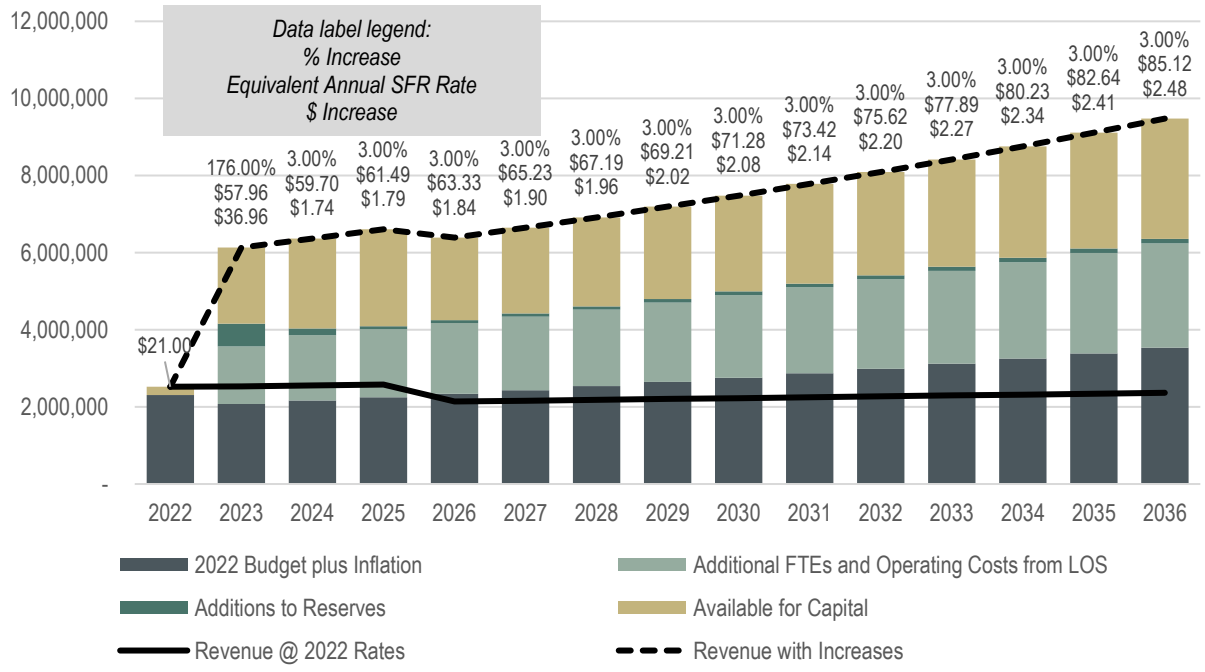
The proactive level of service requires an increase to $57.96 per year per ERU in 2023, which is an increase of roughly $3 per month. This level of service funds approximately $35.0 million in capital projects inflated to the year of construction (2022-2036) and provides funding for up to 4.1 additional FTEs above the minimum required LOS for approximately 12.6 total stormwater FTEs. **Exhibit 10** graphically represents the revenue requirement forecast through 2030.

- Solid black line: Revenue at existing rates.
  - » Rate revenue is expected to be roughly $2.0 million in 2022 and is expected to grow 1.0% per year with customer growth. The Aquifer Protection Area revenue is assumed to sunset in 2025 in this scenario, too.

- Dashed black line: Revenues with rate increases.

  - » Rate revenue must increase to allow the utility to cover its existing financial obligations while also funding capital improvement projects. These rate increases start in 2023.
- Dark blue bar: 2022 Budget plus Inflation
  - » Operating expenses are based on the adopted 2022 budget and increase with the annual cost escalation assumptions previously discussed.
- Green bar: Additional FTEs and Operating Costs from LOS.
  - » The proactive LOS incorporates funding for 4.05 FTEs above the minimum required LOS, for a total of 12.59 FTEs (in addition to the 4.13 FTEs already funded by the stormwater program plus the 4.41 added in the minimum LOS). It also adds recurring program costs of about $65,000 per year, plus inflation, on top of the minimum required level of service, for a total of $389,000 in programmatic costs per year.
- Gold bar: Cash available for capital (i.e., rate funded capital).
  - » In 2023, roughly $2.0 million is available for rate funded capital. With rate increases, this amount is projected to increase to $3.1 million by 2036.
- Dark green bar: Additions to reserves.
  - » As operating costs increase over time, a small amount each year is assumed to be added to reserves to keep up with the operating reserve target.

Exhibit 10: Proactive LOS: Annual Revenue Requirement Forecast 2022-2036



Section IV. CONCLUSION

Based on the capital plan organized by Osborn Consulting, and the staffing and programmatic plan organized by Evergreen StormH20, FCS GROUP recommends the annual rate plans for the minimum required and proactive levels of service as shown in **Exhibit 11** and **Exhibit 12** respectively.

These increases allow the utility to accomplish the following:

- Continue to fund existing operating expenses, plus cost escalation;
- Allow the utility to cash fund $23.3- $35.0 million in capital projects from 2022-2036;
- Generate nearly $1.9-$3.1 million per year for rate-funded capital by 2036; and
- Maintain utility reserves at a healthy level throughout the forecast.

Exhibit 11: Minimum Required Level of Service: Rate Increases

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate per ERU	$21.00	$44.52	$45.86	$47.23	$48.65	$50.11	$51.61	$53.16	$54.75
Annual Increase		$23.52	$1.34	$1.38	$1.42	$1.46	$1.50	$1.55	$1.59
Equivalent Monthly Increase		$1.96	$0.11	$0.11	$0.12	$0.12	$0.13	$0.13	$0.13

Exhibit 12: Proactive Level of Service: Rate Increases (Adopted by City Council)

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Rate per ERU	$21.00	$57.96	$59.70	$61.49	$63.33	$65.23	$67.19	$69.21	$71.28
Annual Increase		$36.96	$1.74	$1.79	$1.84	$1.90	$1.96	$2.02	$2.08
Equivalent Monthly Increase		$3.08	$0.14	$0.15	$0.15	$0.16	$0.16	$0.17	$0.17

Council Action

On November 8, 2022, the Spokane Valley City Council voted to approve the proactive level of service, including adopting a 2023 annual rate per ERU of $58.00. On December 13, 2022, the City formally adopted this rate for 2023 per Resolution 22-023.

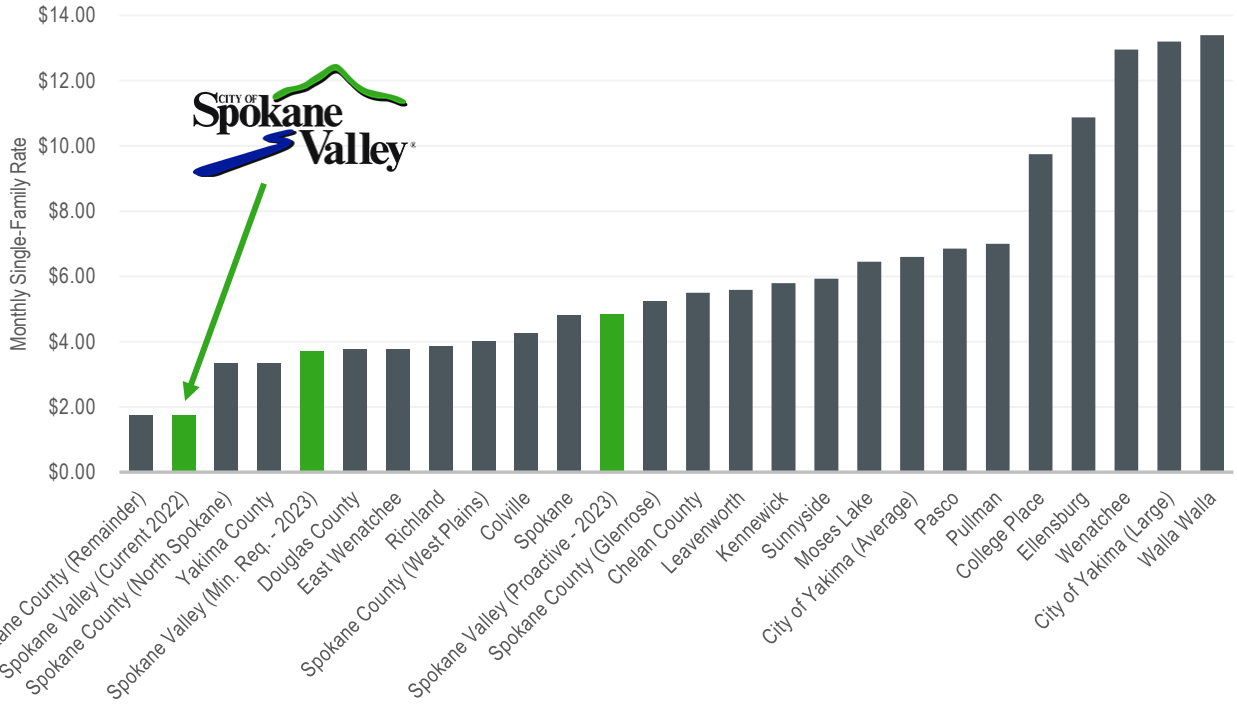
Updating This Study's Findings

It is recommended that the City revisit the study findings during the forecast period to check that the assumptions used are still appropriate and no significant changes have occurred that would alter the results of the study. The City should use the study findings as a living document, routinely comparing the study outcomes to actual revenues and expenses. Any significant or unexpected changes will require adjustments to the rate strategy proposed in this report.

Single-Family Residential Rate Comparison

As a resource to the City and its customers, a rate survey of eastern Washington stormwater utilities was performed. **Exhibit 13** shows the 2022 monthly single-family residential stormwater bills of several jurisdictions, as well as Spokane Valley's 2022 existing and 2023 rates for both levels of service. The City's 2022 monthly equivalent rate is $1.75 and is among the lowest in the survey group. This would increase to $3.71 in 2023 for the minimum required level of service or increase to $4.83 in 2023 for the proactive level of service. As previously noted, the Council approved a motion to adopt the proactive level of service.

Exhibit 13: Jurisdictional Survey – Monthly Single Family Stormwater Rates



Section V. APPENDIX

CAPITAL PLAN TABLE BY LEVEL OF SERVICE

2022 Project Costs in Year

Level of Service 2 - Minimum Required			Unescalated Capital Cost															
ID	Description	Unescalated Total	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
SFM-1	Vera Crest Dr. Subsurface Flow Management	2,570,000	$ -	$ 514,000	$ 514,000	$ 1,542,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SWC-2	Carnahan Rd Conveyance Improvements	170,000	-	-	-	-	34,000	136,000	-	-	-	-	-	-	-	-	-
O&M-4	Sprague---Appleway Swale Modification Project	300,000	-	-	-	-	-	-	60,000	240,000	-	-	-	-	-	-	-
SWC-1	Bowdish Rd Conveyance Improvements	1,020,000	-	-	-	-	-	-	-	-	204,000	816,000	-	-	-	-	-
O&M-1	Pump Station Asset Management Plan (three locations)	80,000	-	-	-	-	-	-	-	-	-	-	16,000	64,000	-	-	-
SWS-1	Havana Rd Stormwater Separation (two locations)	520,000	-	-	-	-	-	-	-	-	-	-	-	-	104,000	416,000	-
OE-1	Ponderosa Dr. MS4 Outfall Elimination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SFM-3	Heather Park Subsurface Flow Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FM-1	Dishman Mica Infiltration Facility Condition Assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SFM-2	Sloan's Addition Subsurface Flow Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FM-2	Chester Creek Wetland Overflow Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O&M-3	Spot Drainage Improvements – Small Works Projects	2,100,000	-	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
WQ-1	MS4 Service Area Stormwater Retrofit	3,500,000	-	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
O&M-2	Stormwater System (Non-UIC) Replacement Projects	2,800,000	-	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
LOS	Level of Service 2 - Minimum Required UIC Retrofit Program Annual Cost	4,955,580	-	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970	353,970
594.31.64.05	Heavy Duty Machinery & Equipment	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
595.40.63.00	Construction - Drainage	105,000	105,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Capital Projects Before Completion Factor	**18,170,580**	155,000	1,467,970	1,467,970	2,495,970	987,970	1,089,970	1,013,970	1,193,970	1,157,970	1,769,970	969,970	1,017,970	1,057,970	1,369,970	953,970
	Completion Factor Impact	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Level of Service 2 - Minimum Required Total Capital Projects	**$ 18,170,580**	**$ 155,000**	**$ 1,467,970**	**$ 1,467,970**	**$ 2,495,970**	**$ 987,970**	**$ 1,089,970**	**$ 1,013,970**	**$ 1,193,970**	**$ 1,157,970**	**$ 1,769,970**	**$ 969,970**	**$ 1,017,970**	**$ 1,057,970**	**$ 1,369,970**	**$ 953,970**

Level of Service 3 - Pro-Active			Unescalated Capital Cost															
ID	Description	Unescalated Total	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
SFM-1	Vera Crest Dr. Subsurface Flow Management	2,570,000	$ -	$ 514,000	$ 514,000	$ 1,542,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SWC-2	Carnahan Rd Conveyance Improvements	170,000	-	-	-	-	34,000	136,000	-	-	-	-	-	-	-	-	-
O&M-4	Sprague---Appleway Swale Modification Project	300,000	-	-	-	-	-	-	60,000	240,000	-	-	-	-	-	-	-
SWC-1	Bowdish Rd Conveyance Improvements	1,020,000	-	-	-	-	-	-	-	-	204,000	816,000	-	-	-	-	-
O&M-1	Pump Station Asset Management Plan (three locations)	80,000	-	-	-	-	-	-	-	-	-	-	16,000	64,000	-	-	-
SWS-1	Havana Rd Stormwater Separation (two locations)	520,000	-	-	-	-	-	-	-	-	-	-	-	-	104,000	416,000	-
OE-1	Ponderosa Dr. MS4 Outfall Elimination	480,000	-	-	-	-	96,000	384,000	-	-	-	-	-	-	-	-	-
SFM-3	Heather Park Subsurface Flow Management	520,000	-	-	-	-	-	-	104,000	416,000	-	-	-	-	-	-	-
FM-1	Dishman Mica Infiltration Facility Condition Assessment	70,000	-	-	-	-	-	-	-	-	-	14,000	56,000	-	-	-	-
SFM-2	Sloan's Addition Subsurface Flow Management	430,000	-	-	-	-	-	-	-	-	-	-	-	86,000	344,000	-	-
FM-2	Chester Creek Wetland Overflow Improvements	340,000	-	-	-	-	-	-	-	-	-	-	-	-	-	68,000	272,000
O&M-3	Spot Drainage Improvements – Small Works Projects	4,200,000	-	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
WQ-1	MS4 Service Area Stormwater Retrofit	3,500,000	-	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
O&M-2	Stormwater System (Non-UIC) Replacement Projects	2,800,000	-	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
LOS	Level of Service 3 - Pro-Active UIC Retrofit Program Annual Cost	9,911,160	-	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940	707,940
594.31.64.05	Heavy Duty Machinery & Equipment	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
595.40.63.00	Construction - Drainage	105,000	105,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Capital Projects Before Completion Factor	**27,066,160**	155,000	1,971,940	1,971,940	2,999,940	1,587,940	1,977,940	1,621,940	2,113,940	1,661,940	2,287,940	1,529,940	1,607,940	1,905,940	1,941,940	1,729,940
	Completion Factor Impact	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Level of Service 3 - Pro-Active Total Capital Projects	**$ 27,066,160**	**$ 155,000**	**$ 1,971,940**	**$ 1,971,940**	**$ 2,999,940**	**$ 1,587,940**	**$ 1,977,940**	**$ 1,621,940**	**$ 2,113,940**	**$ 1,661,940**	**$ 2,287,940**	**$ 1,529,940**	**$ 1,607,940**	**$ 1,905,940**	**$ 1,941,940**	**$ 1,729,940**

APPENDIX P

MS4 Program Implementation Schedule

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.A.5.a	Immediately	High	Develop an ongoing/established program for tracking SWMP development and implementation.
S5.A.6.a.i	Immediately	High	Coordinate with City of Spokane (and other entities, if necessary) to establish and document roles and responsibilities for the control of pollutants where interconnected MS4 areas exists.
S5.A.6.a.ii	Immediately	High	Coordinate and document stormwater management activities for shared water bodies or watersheds with other Permittees to avoid conflicting plans, policies and regulations. This effort can be combined with S5.A.6.a.i.
S5.B.1.a	Immediately	High	Develop and document a strategic or ongoing schedule for providing specific subject area information to different target audiences.
S5.B.1.a.iii	Immediately	High	Develop a specific E&O program for engineers, construction contractors, developers, development review staff, and land use planners.
S5.B.2.a	Immediately	High	Develop and document a program or policy for ongoing opportunities for the public to participate in the development and updates of the SWMP.
S5.B.3.c.i	Immediately	High	Document existing procedures for illicit discharge investigations during routine inspections. Add an illicit discharge component to the inspection field report.
S5.B.3.c.ii	Immediately	High	Review approach to screen "high risk" locations and activities to identify ways to improve the process. Update the document, as needed.
S5.B.3.c.iii	Immediately	High	Develop and document formal procedures for field assessment activities, including outfalls, discharge points, or facilities serving priority areas identified in S5.B.3.c.ii. Field activities, including inspections, should occur during dry weather to help identify illicit discharges/connections.

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.B.3.c.iv	Immediately	High	Develop and document formal IDDE inspection procedures for the MS4 area. Develop a process to track inspections and maintain records, such as in GIS or the City's future asset management program.
S5.B.3.c.vi	Immediately	High	Develop training specifically for all municipal field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, on the identification of an illicit discharge/connection, and the proper procedures for reporting and responding to an illicit connection.
S5.B.3.d.i	Immediately	High	Develop an established procedure for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported.
S5.B.3.d.iii	Immediately	High	Develop and document formal procedures for eliminating discharges.
S5.B.3.d.iv.a	Immediately	High	Update the Spill Response Plan or Illicit Discharge Response Plan to require 911 to be called for spills to the ground that pose an immediate threat to health or the environment.
S5.B.3.d.iv.c	Immediately	High	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection.
S5.B.3.d.iv.d	Immediately	High	Update the Spill Response Plan or Illicit Discharge Response Plan to include the requirement to document the efforts to eliminate the illicit connection within 6 months.
S5.B.3.e	Immediately	High	Develop method to document and maintain training records for IDDE training. See S5.B.3.c.vi.
S5.B.3.e	Immediately	High	Develop a training program for staff responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections. The City can consider combining this with S5B3c.vi.
S5.B.3.e	Immediately	High	Develop follow-up training to be provided as needed to address changes in procedures, techniques, requirements, or staffing.

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.B.4.b.i.(a)	Immediately	High	Develop a process that establishes a communication channel with Ecology to be notified when Ecology has granted an erosivity waiver within the City.
S5.B.4.c.i.(a)	Immediately	High	Develop a process to determine sites with high potential for sediment transport. Create policy to inspect sites with high potential for sediment transport prior to clearing and grading for construction. See S5.B.4.a.
S5.B.4.d	Immediately	High	Document site-specific training, including who attended, role, and topics covered.
S5.B.4.f.ii	Immediately	High	Document and keep records for all training – even site-specific mentorship. Include dates, activities or course descriptions, and names and positions of staff in attendance.
S5.B.4.f.iv	Immediately	High	Develop a process to keep a record of all construction sites that provide notice to Ecology of their intention to apply for the erosivity waiver.
S5.B.5.d.ii	Immediately	High	Develop program and schedule requiring structural BMPs to be inspected at least once every 5 years after final installation, or more frequently as determined by the Permittee.
S5.B.5.d.iii	Immediately	High	Include updated O&M standards that meet those recommended in the SWMMEW in the City's updated O&M Plan.
S5.B.5.d.iv	Immediately	High	Include methods for documentation, reporting, and repair procedures in updated O&M manual for situations where a site is inspected and problems are identified during structural BMP inspections.
S5.B.5.e	Immediately	High	Document training for all staff involved in permitting, planning, review, inspection, and enforcement.
S5.B.5.f	Immediately	High	Develop method to provide information to design professionals about training available on how to comply with the requirements of Appendix 1 and apply the BMPs described in the SWMMEW.
S5.B.5.g.ii	Immediately	High	Include a process in the training development to document and keep training records that include dates, activities or course descriptions, and names and positions of staff in attendance. See S5.B.5.e.

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.B.6.a	Immediately	High	Update O&M Plan for MS4 area and UIC area by December 31, 2022.
S5.B.6.a.i.(j)	Immediately	High	Update MS4 O&M Plan to include BMPs implemented to protect water quality from discharges from other facilities that would reasonably be expected to discharge contaminated runoff.
S5.B.6.a.ii	Immediately	High	Update MS4 O&M Plan to include a schedule of inspections and requirements for record keeping pursuant to S9 Reporting.
S5.B.6.a.ii.(a)	Immediately	High	Develop plan, including schedule and documentation process, to inspect water quality and flow control facilities (swales and UICs) within the MS4 area once every 2 years.
S5.B.6.a.ii(b)	Immediately	High	Develop plan, including schedule and documentation process to inspect catch basins within the MS4 once every 2 years, or other options available in Section S5.B.6.a.iib.1-3 of the Permit.
S5.B.6.a.ii(c)	Immediately	High	Develop a formal plan with procedures and documentation process for inspecting stormwater control facilities after a major storm event. Plan should include what triggers an inspection.
S5.B.6.a.iii	Immediately	High	Include department (and where appropriate, the specific staff) responsible for performing each activity in the updated MS4 O&M Plan.
S5.B.6.b	Immediately	High	Develop formal training with documentation process specific to O&M that includes the inspection/maintenance of each type of facility within the city.
G20	Immediately	High	Develop a process to notify Ecology when the City is unable to comply with any of the terms and conditions of the permit. Notification should be in writing and submitted within 30 days of becoming aware that the non-compliance has occurred.
S8.A.2.c	9/30/2022	High	Submit a Detailed Study Design Proposal for the Non-Vegetated Bioretention Soil Mix Study to Ecology by September 30, 2022.
S5.B.4.a	12/31/2022	High	Develop an ordinance or other regulatory mechanism that requires site plans to be reviewed and sites to be inspected prior to clearing and grading for sites with high potential for sediment transport.

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.B.6.a.i.(a)	12/31/2022	High	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address collection and conveyance systems, including pipes and culverts.
S5.B.6.a.i.(b)	12/31/2022	High	O&M Plan for the MS4 area needs to be updated to include detailed O&M practices and procedures to address parking lots (greater than 5,000 square feet of pollutant-generating impervious surface) that are owned, operated, or maintained by the City.
S5.B.6.a.i.(e)	12/31/2022	High	Update O&M Plan for MS4 area to address O&M for parks and open spaces.
S5.B.4.a.ii	12/31/2022	High	Update the City's Erosion Control Plans to be equivalent to Stormwater Pollution Prevention Plans described in S9.D of the Construction Stormwater Permit.
S5.B.5.b.ii.(a)	12/31/2022	High	Along with allowing non-structural preventative actions and source reduction approaches such as LID, the City should develop and adopt a policy as part of the City's post-construction stormwater management ordinances to encourage minimizing disturbance of native soils and vegetation and reducing the total amount of impervious surface on projects.
S5.B.3.b.i	2/2/2023	High	Update IDDE ordinances to include stormwater facilities on private properties and preventing illicit discharges from pollutant-generating sources associated with existing land uses and activities.
S5.B.3.b.vi	2/2/2023	High	Update IDDE ordinances to include the application of operational or structural source control BMPs (from the SWMMEW), or both, for pollutant-generating sources associated with existing land uses and activities where necessary to prevent illicit discharges.
S5.B.3.b.vii	2/2/2023	High	Update ordinances addressing requirements in S5.B.3, as necessary, by the permit deadline of February 2, 2023.
S8.A.2.d	7/31/2023	Medium	Submit a completed QAPP to Ecology by July 31, 2023.
S5.B.3.a.i	8/1/2023	Medium	Update GIS mapping to include missing size and material for all known outfalls and discharge points.
S5.B.3.a.iii	8/1/2023	Medium	Complete GIS mapping of areas served by the MS4 discharging to the ground, including missing swales.

Permit Section	Compliance Timeframe (immediate or specific date)	Priority	Recommendation for Improvement
S5.B.3.a.iv	8/1/2023	Medium	Complete GIS mapping of permanent stormwater facilities owned or operated by the City.
S5.B.3.a.vi	8/1/2023	Medium	Verify there are no connections from the MS4 to privately owned facilities once modeling is complete and the MS4 area is confirmed.
S5.B.3.a.vii	8/1/2023	Medium	Verify there are no connections between the MS4 owned and operated by the Permittee and other municipalities or public entities once modeling is complete and the MS4 area is confirmed.
S8.A.2.e	12/1/2023	Medium	Begin to conduct the study outlined in the QAPP on or before December 1, 2023.

High and medium priority items were included because they correspond to MS4 Permit Requirements. Low priority items are not required by the Permit but identified as additional opportunities for improvement.