



Spokane County

W A S H I N G T O N

**SIX-YEAR
SEWER CONSTRUCTION
CAPITAL IMPROVEMENT
PROGRAM**

2023 Through 2028

October 2022

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SPOKANE COUNTY

SIX-YEAR SEWER CONSTRUCTION CAPITAL IMPROVEMENT PROGRAM

2023 Through 2028

Prepared by
Spokane County Public Works
Wastewater System Division
October 2022

Adopted by
Board of County Commissioners
of Spokane County
Resolution No. 22-0731

**SIX-YEAR
SEWER CONSTRUCTION
CAPITAL IMPROVEMENT PROGRAM
2023 Through 2028**

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Section 1 – Purpose and Overview

The purpose of the Six-Year Sewer Construction Capital Improvement Program (the “CIP”) is to delineate the County’s sewer improvement priorities and associated expenditures and financing for 2023 through 2028. Adoption of the “CIP” by the Board of County Commissioners provides authorization to the Public Works Director to proceed with the engineering, right-of-way and property acquisition, and preparation of plans/specifications for construction of the capital improvements.

The County’s wastewater collection system has grown dramatically over the last several decades. The County now owns and operates approximately 700 miles of sewer lines and 34 pump stations. Expansion of the system has been accomplished in accordance with the County’s 2014 Comprehensive Wastewater Management Plan (CWMP). The CWMP is currently being updated.

The CIP is an integral component of the CWMP and is typically updated each year to address the forthcoming 6-year period. Between 1985 and 2012 the majority of the sewer projects constructed by the County were accomplished under the County’s Septic Tank Elimination Program (STEP). Those STEP projects were funded with Washington State Department of Ecology (DOE) grant funds, Spokane County funds and connection charges paid by the owners of the properties served.

In addition to some smaller STEP projects, the Wastewater System Division is now directing resources for improvements to the wastewater collection system in the following areas:

- 1) Augmenting hydraulic capacity within the system to accommodate flow increases.
- 2) Extending sewer service into non-sewered portions of the Urban Growth Area.
- 3) Reconstruction or rehabilitation of aging elements within the system.
- 4) Improvements to reduce the vulnerability of critical facilities.

Section 2 – Wastewater Collection System Improvements

This section of the CIP provides detail regarding the capital improvements planned for the County’s wastewater collection system for the years 2023 through 2028. Projects include sewer trunk extensions into areas that currently have no sewer service and segments of sewer mains that will be constructed in conjunction with road projects. There are projects in Spokane Valley designed to eliminate septic tanks near the Spokane River, projects in the Mead – Mt. Spokane area that will eliminate septic tanks and multiple projects to design sewer for installation in coordination with future Spokane County, City of Spokane and City of Spokane Valley road projects.

Table 2-1 identifies the various projects planned during the six-year period. The estimated cost is presented, as well as the phase(s) of the project to be undertaken in each year (i.e. design and/or construction). The table is divided into three sections based on the funding source that will be used for each project. The funding sources are as follows:

Sewer Construction Fund (Fund 403): This fund is used to pay for sewer system extensions and new trunk sewers that are not designated as General Facilities. Fund 403 revenues include the construction cost component of Capital Facilities Rates special connection charges collected pursuant to Spokane County Code (SCC) Chapter 8.03.8280, and sewer trunk charges collected pursuant to SCC Chapter 8.03.8290, as well as interest accrued on the Fund balance.

General Facilities Fund (Fund 438): This fund is used to pay for new General Facilities and capacity upgrades to existing General Facilities. The General Facilities include water reclamation plants, interceptor sewers, and regional wastewater pumping stations. There are eighteen operating pump stations within the County's system that are currently designated as General Facilities. There are three interceptor systems: the Spokane Valley Interceptor, the North Valley Interceptor, and the North Spokane Interceptor. Fund 438 revenue comes from General Facilities Charges (GFCs) which are collected for new sewer connections, or for increases in use pursuant to SCC Chapter 8.03.8320, and interest accrued on Fund balance.

Sewer Operations Fund (Fund 401): This fund is used to pay for the ongoing operation and maintenance of the sewer system, including restorative work to replace aging elements of the system and upgrades to improve or maintain system reliability. Costs of operating the water reclamation facilities, including biosolids management, are also paid from this fund. Fund 401 revenues come mainly from monthly sewer service fees paid by the utility's customers. Annually, a designated portion of the revenue from monthly sewer service fees is earmarked for the "Replacement Reserve Fund" in Fund 401 to provide for the future rehabilitation or replacement of existing sewers and equipment.

Table 2-1 includes a subtotal by year for each of the funding sources (see Subtotals 1, 2, and 3), as well as a total estimated cost by year for all projects.

The last two pages of Section 2 are sewer project maps. The first is a map showing the sewer project areas in the Spokane Valley. The second is a similar map for the sewer project areas in North Spokane. Project Locator Numbers are shown on these maps corresponding to the Project Locator Numbers provided in Table 2-1.

SPOKANE COUNTY WASTEWATER SYSTEM DIVISION

CAPITAL IMPROVEMENT PROGRAM 2023-2028

TABLE 2-1, WASTEWATER COLLECTION SYSTEM IMPROVEMENTS

PROJECT LOCATOR NUMBER	PROJECT NAME	FUNDING SOURCE	EXPENDITURES IN 1000'S OF DOLLARS BY YEAR						TOTAL
			2023	2024	2025	2026	2027	2028	
1	Barker Rd Sewer Ph3 (Euclid & Barker Bore) ¹	Sewer Construction Fund Reserves (403)	\$1,100 Const/CM						\$1,100
2	Lincoln Rd; Crestline to Market ²	Sewer Construction Fund Reserves (403)	\$1,070 Const/CM						\$1,070
3	Donwood Sewer ³	Sewer Construction Fund Reserves (403)	\$100 Design	\$4,300 Const/CM					\$4,400
4	Lane Park Sewer Project ⁴	Sewer Construction Fund Reserves (403)	\$75 Survey	\$75 Design	\$4,800 Const/CM				\$4,950
5	Flora-Tschirley-Dalton Sewer Ext ¹	Sewer Construction Fund Reserves (403)				\$2,000 Const/CM			\$2,000
6	Best Rd: 25th to 31st	Sewer Construction Fund Reserves (403)	\$120 Const						\$120
7	New Stub Project (6 Valley, 14 North)	Sewer Construction Fund Reserves (403)	\$180 Des/Const		\$450 Des/Const				\$630
SUBTOTAL 1		Sewer Construction Fund Reserves (403)	\$2,645	\$4,375	\$5,250	\$2,000	\$0	\$0	\$14,270

¹Projects 1 and 5 will be constructed in conjunction with a City of Spokane Valley (CSV) road surfacing project. The cost of the sewer portion of the project will be funded by Spokane County and the cost of the road portion of the project will be funded by CSV. MOU's are under negotiation.

²Project 2 is being constructed in conjunction with a Spokane County road project.

³Project 3 is a continuation of the Septic Tank Elimination Program. Project 3 is funded through a cooperative effort between the County and CSV. The CSV is contributing additional funds towards road design and construction. An MOU is under negotiation.

⁴Project 4 will be designed and constructed as a continuation of the Septic Tank Elimination Program. The Mead-Mt Spokane Area, which includes Project 4, is considered a Limited Area of More Intense Rural Development (LAMIRD). The Growth Management Act established this designation to recognize and contain areas of existing urban development in rural areas. In the rural element of a comprehensive plan, counties "may allow for limited areas of more intensive rural development, including necessary public facilities and services to serve the limited areas." (RCW 36.70A.070(5)(d)).

SPOKANE COUNTY WASTEWATER SYSTEM DIVISION

CAPITAL IMPROVEMENT PROGRAM 2023-2028

TABLE 2-1, WASTEWATER COLLECTION SYSTEM IMPROVEMENTS

PROJECT LOCATOR NUMBER	PROJECT NAME	FUNDING SOURCE	EXPENDITURES IN 1000'S OF DOLLARS BY YEAR						
			2023	2024	2025	2026	2027	2028	Total
8	Marion Hay PS Parallel Force Main, Phase 3 (Wall St & Country Homes Blvd) ⁵	General Facilities Fund (438)			\$200	\$50	\$7,000		\$7,250
					Design	Design	Const		
9	U.S. Highway 2 Trunk - East Extension	General Facilities Fund (438)	\$100						\$100
			Const						
	SUBTOTAL 2	General Facilities Fund (438)	\$100	\$0	\$200	\$50	\$7,000	\$0	\$7,350

⁵ To be constructed in conjunction with a County road resurfacing / reconstruction project. Construction timeframe estimated and will be dependent upon funding.

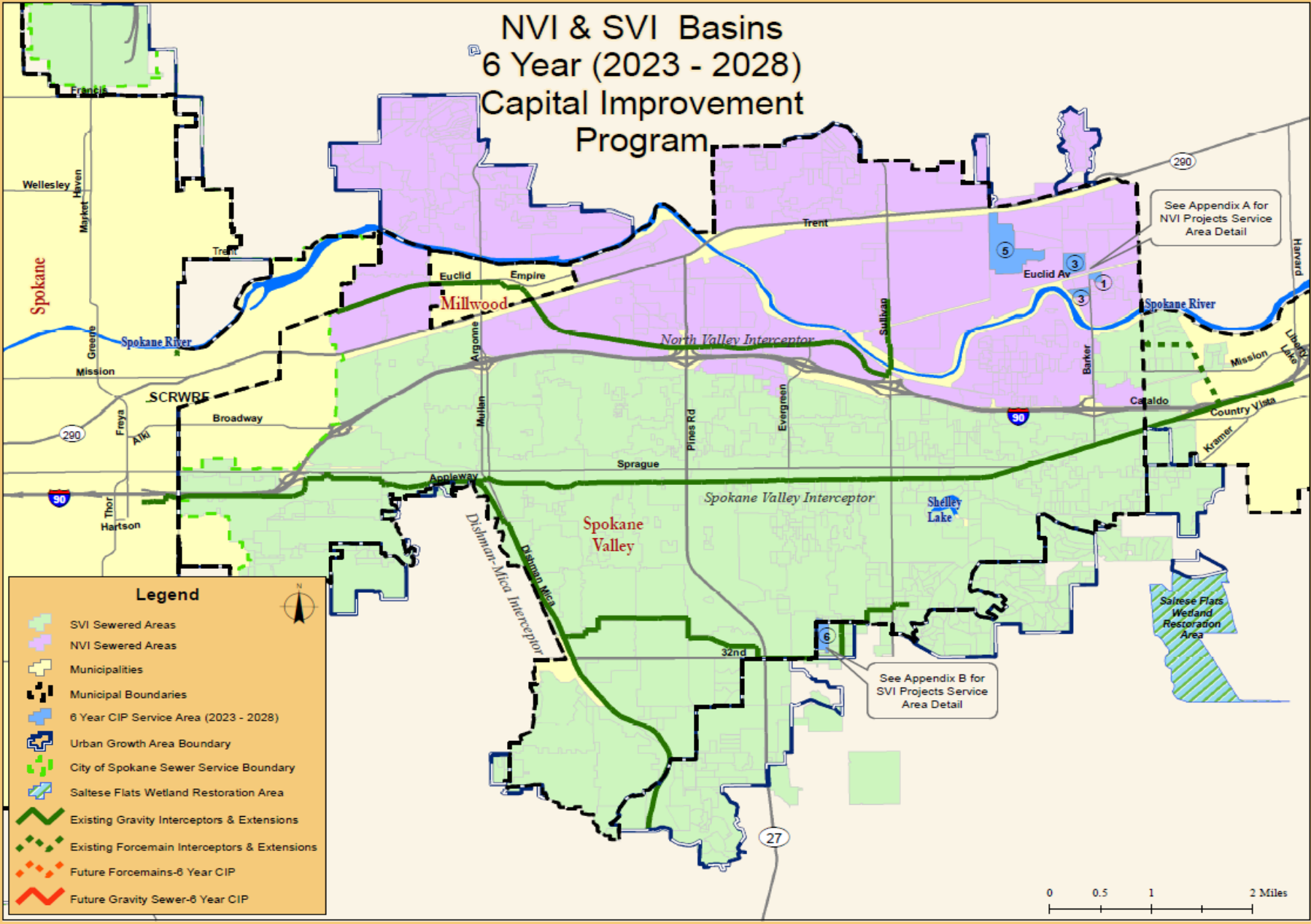
SPOKANE COUNTY WASTEWATER SYSTEM DIVISION

CAPITAL IMPROVEMENT PROGRAM 2023-2028

TABLE 2-1, WASTEWATER COLLECTION SYSTEM IMPROVEMENTS

PROJECT LOCATOR NUMBER	PROJECT NAME	FUNDING SOURCE	EXPENDITURES IN 1000'S OF DOLLARS BY YEAR						
			2023	2024	2025	2026	2027	2028	TOTAL
10	Fairwood Pump Station Overflow Storage Facility	Sewer Operations Repr/Replc Fund (401)						\$200	\$200
								Des & Const	
11	Marion Hay Meter Project	Sewer Operations Repr/Replc Fund (401)	\$120						\$120
			Des & Const						
N/A	Sewer Line Restoration Program	Sewer Operations Repr/Replc Fund (401)	\$100	\$100	\$250	\$400	\$400	\$400	\$1,650
			Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const
N/A	Pump Station Upgrades Electrical	Sewer Operations Repr/Replc Fund (401)	\$300	\$300	\$400	\$400	\$400	\$400	\$2,200
			Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const
N/A	Pump Station Reliability	Sewer Operations Repr/Replc Fund (401)	\$35	\$35	\$35	\$35	\$35	\$35	\$210
			Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const	Des & Const
	SUBTOTAL 3	Sewer Operations Repair/Replc Fund	\$555	\$435	\$685	\$835	\$835	\$1,035	\$4,380
TOTALS-WASTEWATER COLLECTION SYSTEM			\$3,300	\$4,810	\$6,135	\$2,885	\$7,835	\$1,035	\$26,000

NVI & SVI Basins 6 Year (2023 - 2028) Capital Improvement Program

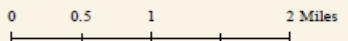


See Appendix A for NVI Projects Service Area Detail

See Appendix B for SVI Projects Service Area Detail

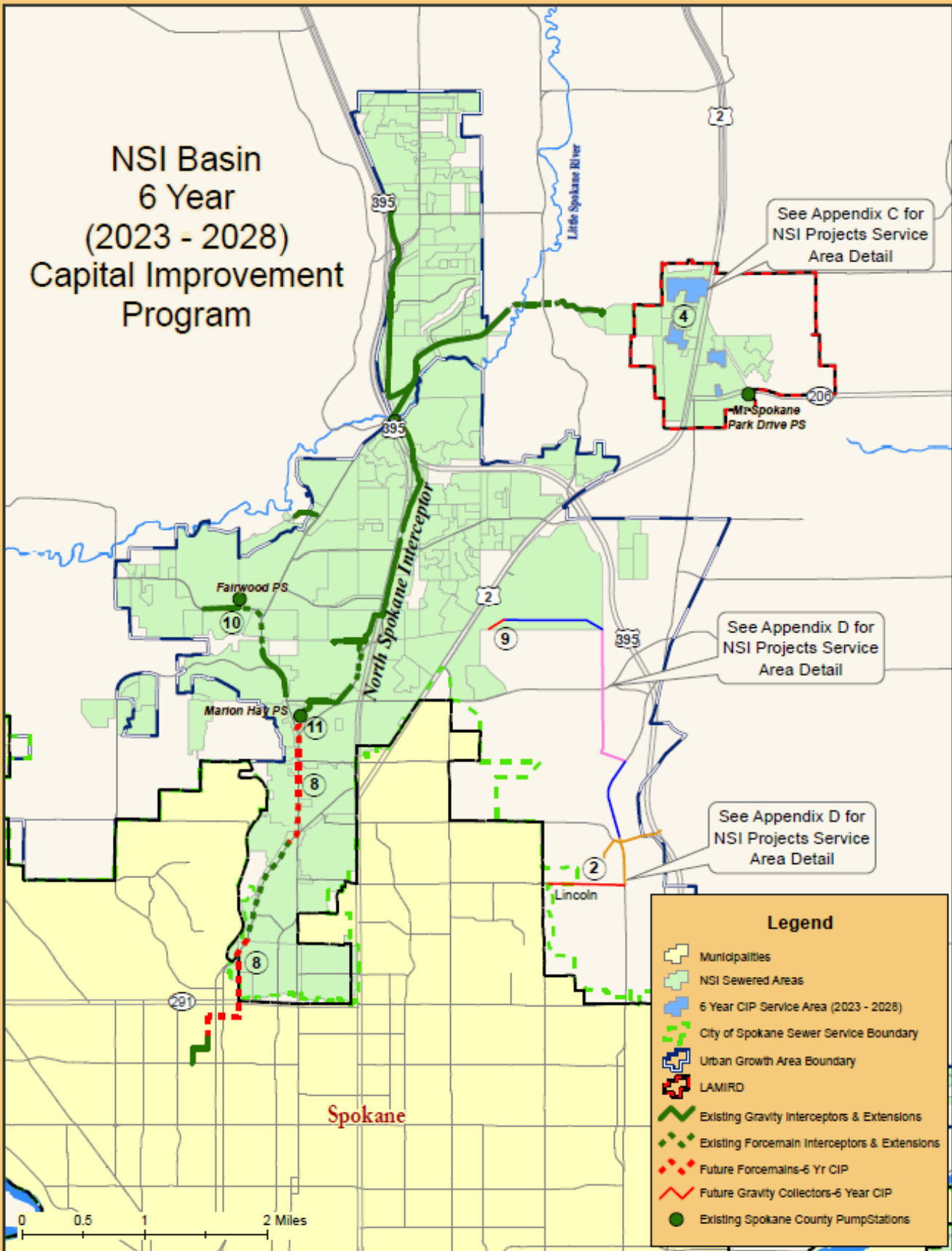
Legend

- SVI Sewered Areas
- NVI Sewered Areas
- Municipalities
- Municipal Boundaries
- 6 Year CIP Service Area (2023 - 2028)
- Urban Growth Area Boundary
- City of Spokane Sewer Service Boundary
- Saltese Flats Wetland Restoration Area
- Existing Gravity Interceptors & Extensions
- Existing Forcemain Interceptors & Extensions
- Future Forcemain-6 Year CIP
- Future Gravity Sewer-6 Year CIP



Map Produced September 19, 2022 by Spokane County Wastewater System Division GIS

NSI Basin 6 Year (2023 - 2028) Capital Improvement Program



Map Produced September 26, 2022 by Spokane County Wastewater System Division GIS

Section 3 – Riverside Park Water Reclamation Facility (RPWRF) Upgrades

Spokane County currently owns 10 million gallons per day (mgd) of treatment capacity at the City of Spokane's RPWRF. Significant upgrades have recently been completed at the RPWRF in order to meet more stringent discharge requirements imposed by regulation. The most costly recent upgrade has been the installation of a state-of-the-art filtration system that greatly enhances the facility's performance in reducing pollutants in the effluent to extremely small concentrations. The construction/installation work on the filtration system was substantially completed in 2021, and has now been put into operation.

Spokane County participates in the cost of RPWRF upgrades on a "prorated share" basis. Table 3-1 provides a summary of the County's estimated share of upgrade costs for the RPWRF for the years 2023 through 2028.

The County's monthly sewer service fees include a Wastewater Treatment Plant Charge (in accordance with SCC Chapter 8.03). These charges are deposited into the County's Wastewater Treatment Plant Fund (WTPF). In turn, a portion of these funds are used to pay the County's share of the RPWRF upgrade costs, either through direct lump sum payment, or through payment of the debt service for bonds sold to cover costs. Funds from the General Facilities Fund (438) may also be used to cover a portion of the upgrade costs.

Bonds were sold in 2007 (\$8.29 million) to pay for the County's share of the upgrades at RPWRF completed in 2007. Debt service for these bonds is currently scheduled to continue through 2032. Payments made for upgrades that were completed from 2008 forward have been paid directly from the WTPF fund balance.

Additional bonds will not need to be sold to cover the County's share of upgrade costs through 2029, as annual payments for those costs will be paid from the available fund balance in the WTPF. In the event that the cost of future upgrades leads to an anticipated short term deficit in the WTPF, consideration should be given to an interim interfund loan from the Replacement Reserve in Fund 401 to avoid the issuance of additional longer-term debt.

The County's capital share payments to the City of Spokane are typically made in the first quarter of each year, based on the previous year's expenses incurred by the City.

The budget amounts listed in Table 3-1 are the best available estimates at the time of adoption of this CIP. The City of Spokane regularly adjusts the specific timing of many of the project improvements proposed at RPWRF. Accordingly, the capital improvement project budget estimates in this section will be updated periodically as revised estimates become available.

TABLE 3-1
SPOKANE COUNTY
RIVERSIDE PARK WATER RECLAMATION FACILITY (RPWRF) UPGRADES

(Cost Estimate & Funding in Thousands of Dollars)

Year	2023	2024	2025	2026	2027	2028	Total
Upgrade Costs at RPWRF for Water Quality	\$500	\$500	\$500	\$500	\$500	\$500	\$3,000

Notes:

- Costs are shown in the table above in year of expenditure by the City of Spokane. Payment by County to City typically occurs in the first quarter of the year following year of expenditure.
- If needed, the County has the option of making transfers/interim loans using available funds in Fund 401 to pay for a portion of the upgrade costs, in lieu of issuing additional debt to cover those costs.
- Funds to pay debt service for bonds previously sold and/or loans obtained to finance the RPWRF Upgrades will continue to come from the Wastewater Treatment Plant Fund and the General Facilities Fund.

Section 4 – Water Reclamation Facilities Improvements

This section of the CIP provides details regarding the capital improvements planned for the County's water reclamation system for the years 2023 through 2028.

Pursuant to 2010 approved Wastewater Facility Plan (WFP), the County constructed and owns the Spokane County Regional Water Reclamation Facility (SCRWRF). Operations of the SCRWRF is by contract until 2031 under a 20-year Service Contract with Jacobs Engineering Group, Inc.

Since it went on-line in 2011 SCRWRF was thought to provide a treatment capacity of 8 million gallons per day (mgd). In mid-2022, the County determined that due to higher strength sewage, the SCRWRF's treatment capacity is closer to 7 mgd. The SCRWRF is now being operated at approximately 7 mgd. The County will continue to track sewer flows and loads to the SCRWRF to maximize its capacity. It is projected that this treatment capacity, combined with 10 mgd of treatment capacity the County owns at the City of Spokane's Riverside Park Water Reclamation Facility (RPWRF), will provide the needed capacity for at least 20 years. The SCRWRF design allows for expansion in increments of 4 mgd and will be expandable up to 24 mgd. It is anticipated the SCRWRF can be expanded to provide for many decades of future growth in the Spokane Valley.

The SCRWRF operates under a National Pollutant Discharge Elimination System (NPDES) Permit issued by the Department of Ecology that provides limitations for a number of constituents in the SCRWRF effluent. Permit effluent limits for phosphorus, ammonia, and carbonaceous biochemical oxygen demand (CBOD) are the result of a Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load plan (DOTMDL) developed by Ecology and approved by the US Environmental Protection Agency in May 2010. To comply with the DOTMDL, the WFP explored potential regional uses of reclaimed water such as urban irrigation, industrial reuse, aquifer recharge, and wetlands restoration. Spokane County's Regional Water Reclamation Facility produces Class A reclaimed water.

Concurrent with the WFP, Spokane County prepared a Reclaimed Water Use Study (RWUS) in June 2009. The RWUS examined several options for use of reclaimed water from the SCRWRF in more detail. One project from the RWUS being developed as a potential site for reclaimed water use is the Saltese Flats wetlands restoration. This first phase of work in 2018 to 2020 prepared the Saltese Flats location, using natural surface runoff, as a prospective future site for Class A reclaimed water. Additional restoration design may occur in 2023 and construction may occur in 2024.

Spokane County is constructing the Doris Morrison Learning Center at the north end of Saltese Flats. This learning center was envisioned during the County's acquisition of property for the Saltese Flats project, and was included in the planning for the associated beneficial uses of the property for water resource education and historical preservation.

Spokane County has partnered with Central Valley School District for siting the learning Center north of Saltese Flats on District property. The District donated a 2-acre site for the learning center and provided easements for the access road and utilities. Spokane

County also received funding of \$500K in 2020 and \$1M in 2021 from the Washington State capital budget to enhance the learning center. Construction of the learning center began in 2022 and will be completed in 2023.

The SCRWRF and associated facilities were financed by revenue bonds and limited tax general obligation bonds. A grant and loan from the Public Works Trust Fund were also obtained. Debt service will continue to be drawn from the Wastewater Treatment Plant Fund and General Facilities Fund.

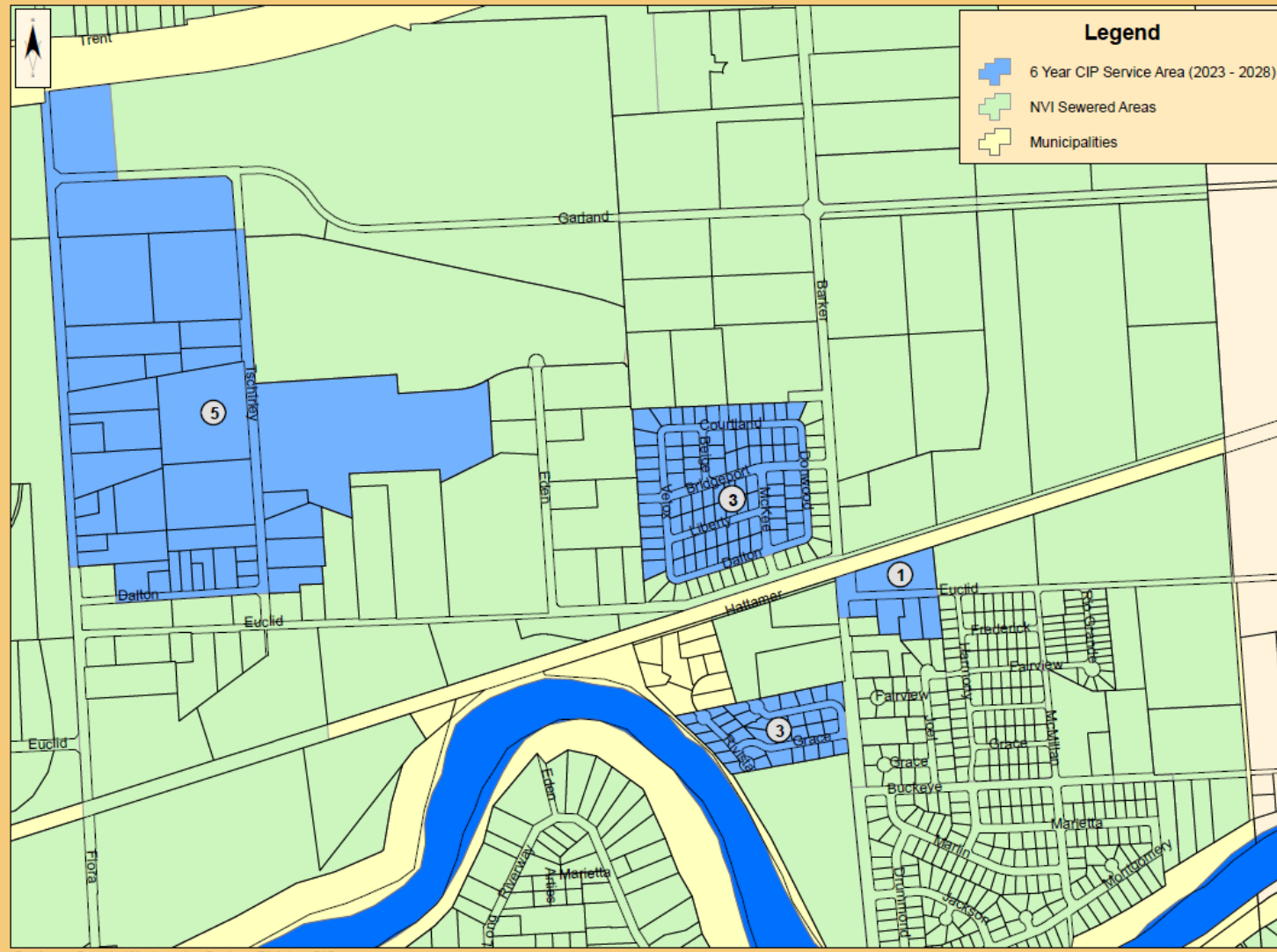
The cost estimates for the facilities presented in Table 4-1 are based on the following assumptions:

Funded from General Facilities Fund 438:

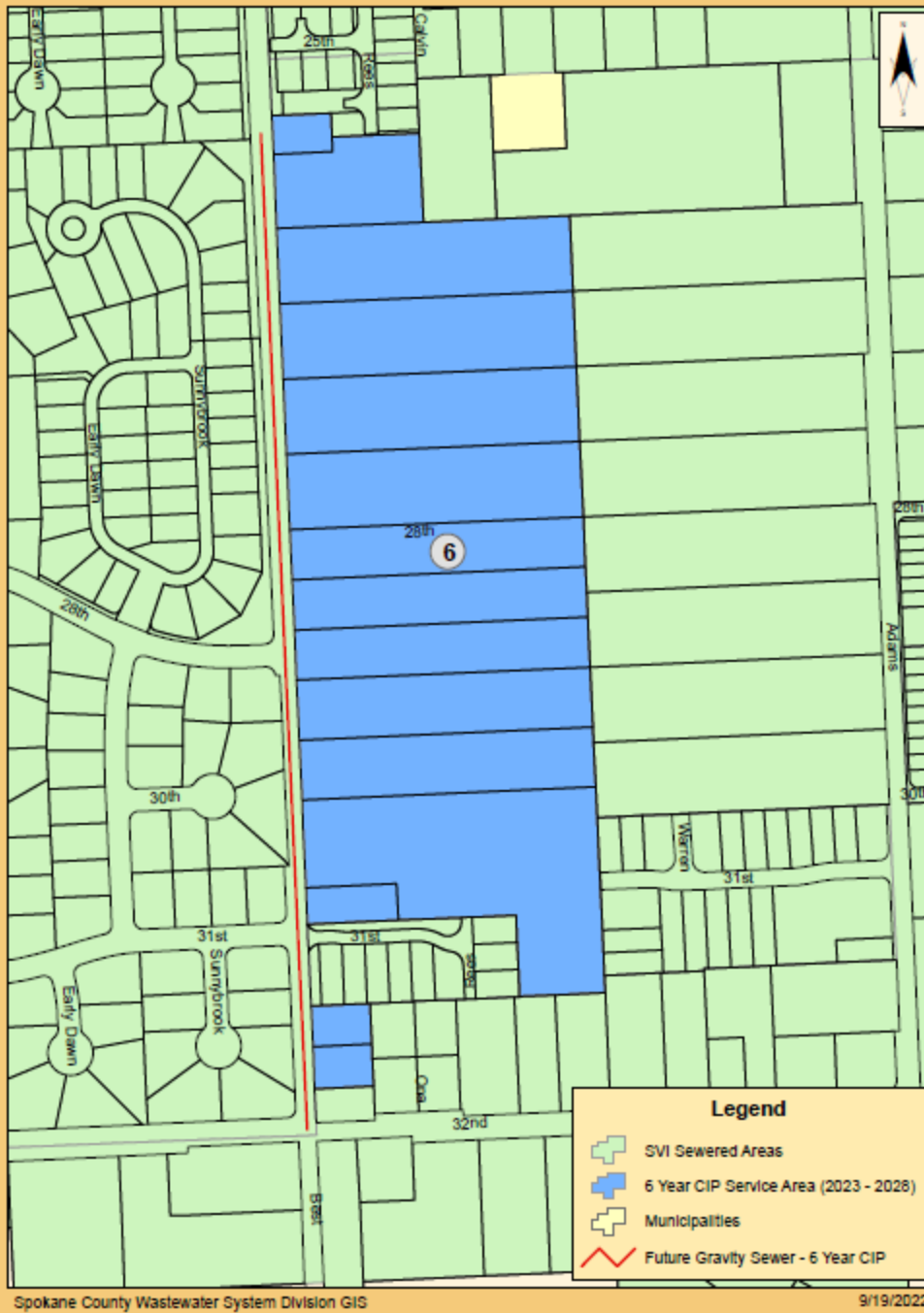
- Finish construction of the learning center.
- Additional Saltese Flats restoration design and construction.
- Minor construction at the SCRWRF (access gate and sampling port).

SPOKANE COUNTY ENVIRONMENTAL SERVICES								
CAPITAL IMPROVEMENT PROGRAM 2023-2028								
TABLE 4-1, WATER RECLAMATION FACILITIES IMPROVEMENTS								
		EXPENDITURES IN 1000'S OF DOLLARS BY YEAR						
PROJECT NAME	FUNDING SOURCE	2023	2024	2025	2026	2027	2028	Total
Doris Morrison Learning Center	General Facilities Fund (438)	\$330 Const						\$330
Additional Saltese Flats Restoration Construction	General Facilities Fund (438)	\$100 Design	\$600 Design & Const					\$700
SCRWRF minor construction	General Facilities Fund (438)	\$50 Const						\$50
TOTALS	General Facilities Fund (438)	\$480	\$600	\$0	\$0	\$0	\$0	\$1,080

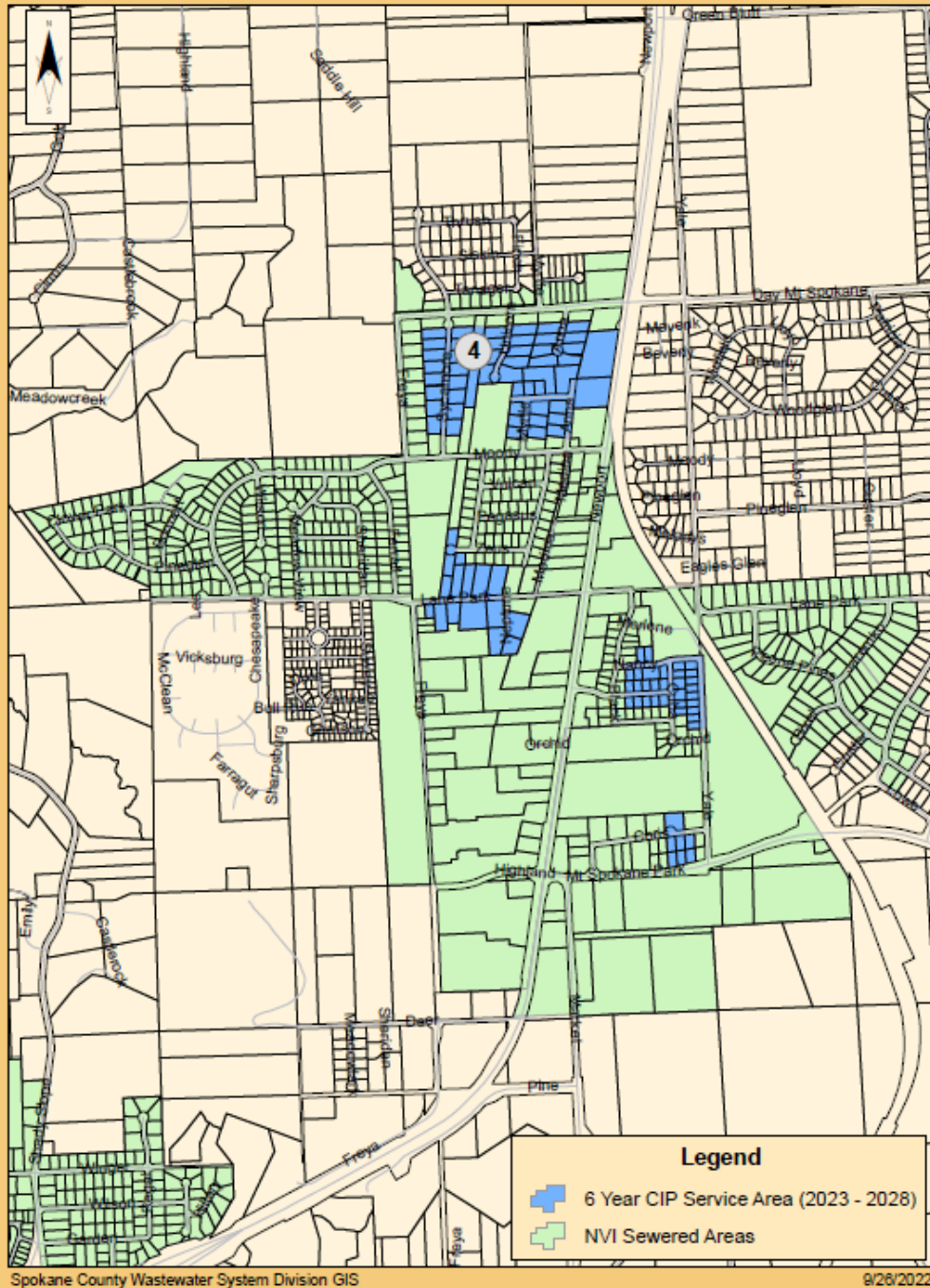
Appendix A - NVI Projects Service Area



Appendix B - SVI Projects Service Area (Best Road)



Appendix C - NSI Projects Service Area



Appendix D - NSI Projects Service Area (Lincoln Road & U.S. Highway 2 Trunk - East Extension)

