**EVERSON CITY COUNCIL MEETING**

# Agenda

**May 26, 2026 at 7:00 PM**

## 1. CALL TO ORDER

- **a.)** Flag Salute / Roll Call
- **b.)** Approval of Minutes - May 12, 2026

## 2. AUDIENCE PARTICIPATION

## 3. PUBLIC HEARING

- **a.)** Resolution 625-26 Everson General Sewer Plan Update

## 4. NEW BUSINESS/COUNCIL ACTION

- **a.)** Comprehensive Plan Update- Ch. 9 Economic Development Draft
- **b.)** ADU Discussion
- **c.)** Memo- Surplus Request

## 5. COMMITTEE REPORT

- **a.)** Finance Committee

## 6. APPROVALS

| | | | | |
|---|---|---|---|---|
| **a.)** | Checks: | 37935-37957 | in the amount of | $333,564.09 |
| | EFTs: | | in the amount of | $ 5,573.34 |

## 7. OTHER ITEMS

## 8. ADJOURNMENT

**Upcoming Important Public Hearings/Meetings:**

- **a.)** June 9, 2026: Everson Jurisdiction Profile for the 2026 update of the Whatcom County Natural Hazard Mitigation Plan

Sign language interpreter service, assertive listening devices and communication materials in alternative formats including Braille, large print, and audio tape are available upon 7 working days advance notice by contacting the telephone number listed below. Questions concerning special needs for persons with disabilities not covered above may also be addressed by contacting the City of Everson at (360) 966-3411. Written requests for material and/or special needs should be addressed to the Deputy Clerk, City of Everson, PO Box 315, Everson, WA 98247. Parking for disabled persons is available near the Everson Senior Center southeast entrance.

# Everson City Council Minutes
# May 12, 2026

| Councilmembers Present: | Councilmembers Absent/Excused: | Staff Present: |
|---|---|---|
| Mayor John Perry | | Savannah Larson, Finance Director/City Clerk |
| James Wilson | | Dave Schoonover, Public Works Director |
| Jennifer Lautenbach | | Dan MacPhee, Chief of Police |
| Matthew Goering | | Jared Witman, Water/Sewer Superintendent |
| John Hammond | | |
| Ashley Brown | | |

**CALL TO ORDER**

**a.)** Flag Salute / Roll Call
Mayor Perry called the meeting to order at 7:00 p.m.

**b.)** Approval of Minutes - April 28, 2026

**Councilmember Goering moved to approve April 28, 2026 Council Minutes, seconded by Councilmember Brown. Motion carried with unanimous approval. 5-0.**

**AUDIENCE PARTICIPATION** - **Josh Crosby** from FEMA wanted to share a few things with the council they have going on in Everson. FEMA is supporting Washington State and recovery efforts. One of the ways they are doing this is through individual assistance. Washington State is working on the public assistance portion. FEMA is working on assistance for individuals. One of the ways they're doing that is through individual assistance. Citizens can go to 700 Strandell St., Everson, WA every Tuesday from 5 p.m. - 8 p.m. The last day to register for assistance is June 10, 2026. He would encourage citizens to apply even if they are unsure if they are eligible for assistance because after the deadline they can't apply. Residents can go and sit down with someone in person who can walk them through the entire process. He also wants people to be aware of scams. Neither Washington State nor FEMA will charge money for services. Scams can be reported to 1-800-621-FEMA. **Dan Robinson,** wants to learn more about how the Nooksack flooding is being considered by the various entities along the Nooksack and going north into Canada? He doesn't think a full study has been done on dredging the Nooksack River and if it can be done safely. Have they studied what the ramifications would be? He is curious about what conversations are happening regarding future flooding. What plans is the city working on? Mayor Perry said he would do a report towards the end of the meeting.

**PUBLIC HEARING**

**a.)** Resolution 624-26 Everson Water System Plan
Dave Schoonover said we are looking for council to authorize the Mayor to sign Resolution 624-26 Everson Water System Plan. We are trying to expand our UGA, prior to doing that we need to adopt a water system plan and general sewer system plan before Whatcom County adopts their Comprehensive Plan, at the end of June. We still need to send our Water System Plan to Washington Department of Health. We need to have this resolution passed by council prior to Whatcom County adopting their Comprehensive Plan. If we don't do this we could lose our ability to expand. Audience Participation: None. Council Discussion: Councilmember Hammond didn't see anything to prevent approving. Dave Schoonover said this will come back to council once

everything gets completed. This is for preliminary adoption. We want to get another deep well in the future. If our deep well goes out we are reliant on our two shallow wells.

**Councilmember Hammond moved to authorize the Mayor to sign Resolution 624-26 Everson Water System Plan, seconded by Councilmember Goering. Motion carried with unanimous approval. 5-0.**

**NEW BUSINESS/COUNCIL ACTION**

**a.)** Resolution 623-26- Emergency Procurement Water Leak E. 3rd St.
Dave Schoonover introduced Resolution 623-26 Emergency Procurement Water Leak E. 3rd. St. They had a water leak in the middle of the night that needed to be repaired timely.

**Councilmember Goering made a motion to authorize the Mayor to sign Resolution 623-26 Emergency Procurement Water Leak E. 3rd St., seconded by Councilmember Lautenbach. Motion carried with unanimous approval. 5-0.**

**COMMITTEE REPORT**

**a.)** Public Properties
Councilmember Lautenbach said they discussed the projects that are going on in the city right now. SR544 has curb & gutter starting near Everson Elementary School. SR544 Sidewalk is a little behind but moving well. The detour should be done early July. Blair Drive should be done the end of June or early July. South Harkness has a major tie in on Thursday west of Everson Farm & Garden. Notices have gone out to those affected. The City Hall Remodel Project should be done beginning of June.

**APPROVALS**

**a.)**

| | | | |
|---|---|---|---|
| Checks: | 37888-37931 | in the amount of | $1,234, 563.18 |
| EFTs May 1st Council: | | in the amount of | $ 1,511.45 |
| EFT after April 2nd: | | in the amount of | $ 2,251.22 |
| Payroll: | April 2026 | in the amount of | $ 235,827.34 |

**Councilmember Goering moved to approve payment of the vouchers, seconded by Councilmember Brown. Motion carried with unanimous approval. 5-0.**

**OTHER ITEMS**

**a.)** Dan MacPhee said he along with Dave Schoonover and Jared Witman are meeting with Ski to Sea at Riverside Park on the upcoming Ski to Sea Race details. There will be minimal detours/closures while bicyclists are going through town. They are trying to boost patrols in construction areas and will continue to do so.

**b.)** Dave Schoonover said they are getting close to opening walking path and garden spot at Ramstead Park. Riverside Park is fully open and has new chips.

**c.)** Mayor Perry said he attended a meeting regarding the ring dykes and figuring out the alignment. There will be a one-page fact sheet on the Whatcom County River and Flood website soon. They will be meeting weekly. Geotech will be doing test hole boring in June.

**ADJOURNMENT**

**a.)** Adjournment

**Councilmember Hammond made a motion to adjourn the meeting at 7:21 p.m., seconded by Councilmember Lautenbach. Motion carried with unanimous approval. 5-0.**

John Perry, Mayor

Savannah Larson, Finance Director/City Clerk

**Resolution No. 625-26**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EVERSON, WASHINGTON, APPROVING PRELIMINARY ADOPTION OF THE CITY OF EVERSON GENERAL SEWER PLAN AMENDMENT.**

**WHEREAS**, the City of Everson owns and operates a sanitary sewer system that serves the citizens of the City; and

**WHEREAS**, RCW 90.48 requires the City to prepare a General Sewer Plan to address planned growth over the next twenty years; and

**WHEREAS,** the most recent update of the City's General Sewer Plan was adopted by Council in April of 2012; and

**WHEREAS**, WAC 173-240-050 establishes the contents that must be included in a general sewer plan; and

**WHEREAS**, the Washington State Growth Management Act, RCW 36.70A, also requires the City to prepare a capital facility plan or plans that address the provision of urban services, including sanitary sewer services, over the 20-year planning period; and

**WHEREAS**, the City is required to plan for capital improvement projects that will be necessary to serve projected growth over the 20-year planning period and to prepare a financial analysis that demonstrates the City's ability to pay for such improvements; and

**WHEREAS**, in 2023 the City entered into a professional services agreement with BHC Consultants, Inc. to prepare the General Sewer Plan Amendment; and

**WHEREAS**, working in cooperation with City staff, BHC Consultants, Inc. prepared a draft General Sewer Plan Amendment for the City of Everson which was reviewed on a preliminary basis by Whatcom County Planning and Development Services; and

**WHEREAS**, comments received from the Whatcom County Planning and Development Services have been incorporated into the Everson General Sewer Plan Amendment in conformance with the requirements established in WAC 173-240-050 and RCW 36.70A; and

**WHEREAS,** on March 18, 2026, the City sent the draft General Sewer Plan Amendment to the Department of Ecology for preliminary review, and no comments have yet been received from the department; and

**WHEREAS**, on May 6, 2026, the City of Everson, acting as lead agency under the State Environmental Policy Act, RCW 43.21C, issued a Determination of Nonsignificance in relation to the proposed Everson General Sewer Plan Amendment, and no comments were received during the 14-day comment period; and

**WHEREAS**, public notice was provided in the Lynden Tribune on May 6, 2026 regarding the holding of the public hearing before the Everson City Council on May 26, 2026 to receive public testimony regarding the proposed General Sewer Plan Amendment; and

**WHEREAS**, a public hearing before the Everson City Council to consider the proposed Everson General Sewer Plan Amendment was held on May 26, 2026 where opportunity for public comment was provided and public testimony was received; and

**WHEREAS**, following the closing of the public hearing, the City Council, having considered the testimony at the hearing and all items in the record, does desire to adopt the Everson General Sewer Plan Amendment; and

**WHEREAS**, the City Council finds that adoption of the General Sewer Plan Amendment will support future development within the City and its urban growth area while protecting the public health, safety and general welfare of the citizens residing therein and the natural environment; Now, therefore**,**

**THE CITY COUNCIL OF THE CITY OF EVERSON, WASHINGTON, HEREBY RESOLVES as follows:**

**SECTION 1.**

The City of Everson 2026 General Sewer Plan Amendment, a copy of which is attached hereto as **Exhibit A**, is hereby adopted by the Everson City Council pending review and approval by the Washington State Department of Ecology, and that, if required, a subsequent public hearing before City Council shall occur following receipt of comments from DOE and prior to final adoption by ordinance.

**SECTION 2.**

That the City forward a copy of this resolution, together with all attachments thereto and necessary forms to the Washington State Department of Ecology within thirty (30) days of the date of passage.

ADOPTED by a majority vote of the City Council of the City of Everson, Washington, at a regular and public meeting of said Council held the ____ day of _____, 2026.

CITY OF EVERSON, WASHINGTON

_____
John Perry, Mayor

ATTESTED/AUTHENTICATED;

_____
Savannah Larson, Finance Director/City Clerk

APPROVED AS TO FORM:

_____
Peter Ruffatto, City Attorney

# EXHIBIT A

## City of Everson

## 2026 General Sewer Plan Amendment

April 2026

bhc CONSULTANTS
1155 N. State Street, Suite 700
Bellingham, WA 98225
(564) 225-3995

## ACKNOWLEDGEMENTS

The 2025 General Sewer Plan Amendment was developed under the direct supervision of Kenneth Gray, PE of BHC Consultants, LLC.


Kenneth Gray

Digitally signed by Kenneth Gray
DN: C=US, E=kenneth.gray@bhcconsultants.com, O=BHC Consultants.com, CN=Kenneth Gray
Date: 2026.04.29 12:02:33-07'00'

Kenneth Gray, PE
Project Manager

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The elements amendments serve as an update to the City of Everson 2012 General Sewer Plan due to changes in the projected population into the City described in the 2045 Whatcom County Comprehensive Plan.

The general format of the elements amendments follow the chapters of the 2012 General Sewer Plan. Only the chapters impacted by the 2026 Whatcom County Comprehensive Plan are submitted as part of the 2025 General Sewer Plan Amendments.

## List of Tables

## List of Figures



## List of Appendices

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# ES Executive Summary

<The following replaces the "Executive Summary" in the *2012 General Sewer Plan* (2012 GSP) in its entirety>

The City of Everson General Sewer Plan (GSP) reviews the City of Everson's (City) current wastewater system and looks at the impact of projected growth on both the City's collection system and the Everson Wastewater Treatment Plant (WWTP). The GSP identifies future facilities required to accommodate both existing and future wastewater collection and treatment needs as the City's population grows and development expands beyond the current boundaries and into the Urban Growth Area over the next 20 years. The City limits has approximately 1,025 acres with a current (2023) population of 3,171.

## ES.1 Existing Sewage Facilities

There are approximately nine miles of pipe and nine operating wastewater pump stations within the City of Everson sewage collection system. The Everson WWTP is an extended aeration secondary treatment plant using oxidation ditches that performs very well and consistently. Sludge is collected from clarifiers after treatment in the oxidation ditches and pumped to an aerobic digester/gravity thickener. After digestion and thickening the sludge is transported to Tjoelker Farms for further treatment and commercial land application. The effluent is treated with chlorine, and after dechlorination, is discharged into the Nooksack River.

The Everson WWTP treats all sewage from the City of Nooksack.

## ES.2 Projected Population

The City's Comprehensive Land Use Plan and 2026 Whatcom County Comprehensive Plan project the City of Everson population and their respective Urban Growth Areas (UGA) to be approximately 4,579 people by the year 2045. This is a 44 percent increase over the 2023 population and equates to an estimated population increase of about 1,408. The projected growth over this period equates to an annual growth rate of approximately 1.7 percent. The City of Everson is projected to experience growth beyond the current city boundaries into the (UGA) during the planning period.

## ES.3 Projected Wastewater Flows and Loads

Future wastewater flows projections were modeled based on population growth and land use projections. The City of Nooksack model is an input into the Everson system in the East Main Street Collector. Four modeling scenarios were developed to analyze the Everson wastewater conveyance system:

- Existing Scenario – The existing facilities were calibrated against current flow data
- 2031 Scenario – Projected population of 3,624, distributed within the current City limits and UGA.
- 2045 Scenario – Projected population of 4,579, distributed within the City limits and UGA.

Influent wastewater flows for years 2020 to 2023 were studied to establish a baseline for projecting future wastewater flows and loadings at the WWTP. Future wastewater flow was related to growth projections and yielded flow values for the 20-year planning period. The projected future wastewater flows to the Everson WWTP, including City of Nooksack flows, are summarized in Table ES-1.

### Table ES-1
### Projected Wastewater Flows (MGD)

| Flow (mgd) | 2020 – 2023 | 2031 | 2045 |
|---|---|---|---|
| Average Annual | 0.300 | 0.372 | 0.473 |
| Average Day of the Max Month | 0.445 | 0.552 | 0.703 |
| Peak Day Flow | 0.811 | 1.006 | 1.279 |
| Peak Hour Flow | 1.056 | 1.281 | 1.589 |

Table ES-2 summarizes the projected flows and loads at the WWTP over the planning horizon compared to the design values and current NPDES permit requirements.

### Table ES-2
### Plant Design Versus Projected Flows and Loads

| | Design | NPDES Permit | Projections by Year | | |
|---|---|---|---|---|---|
| | | | 2020-'23 | 2031 | 2045 |
| **Flow, MGD** | | | | | |
| Average Annual | 0.478 | | 0.300 | 0.364 | 0.473 |
| Maximum Month | 0.661 | 0.661 | 0.445 | 0.541 | 0.703 |
| Peak Day | 1.43 | | 0.811 | 0.985 | 1.279 |
| Peak Hour | 1.502 | | 1.056 | 1.258 | 1.589 |
| **BOD, lbs/day** | | | | | |
| Average Annual | | | 618 | 749 | 973 |
| Maximum Month | 1,149 | 1,149 | 741 | 898 | 1,166 |
| Peak Day | | | 991 | 1,303 | 1,692 |
| **TSS, lbs/day** | | | | | |
| Average Annual | | | 641 | 7776 | 1008 |
| Maximum Month | 1,110 | 1,110 | 852 | 1,090 | 1,416 |
| Peak Day | | | 1,579 | 2,093 | 2,718 |

The flow, 5-day biological oxygen demand (BOD), and total suspended solids (TSS) parameters are anticipated to exceed the NPDES limits within the planning period. Projections suggest a WWTP expansion project will be needed within the 20-year planning period. It is proposed that the City conduct a WWTP study that addresses rerating some unit processes, future nitrogen effluent limits, as well as perform a preliminary WWTP expansion project alternatives analysis within the 6-year (near-term) planning period.

## ES.4 Results of Analysis

A comprehension analysis was performed for the WWTP. The results of the projected flows and loads analysis yielded the following necessary upgrades to the treatment plant over the planning horizon:

- Flow, BOD, and TSS influent loadings are anticipated to exceed the NPDES permit limits in 2041, 2044, and 2032, respectively. Based on the design of the WWTP, it is likely that a rerate study can be shown that demonstrates the flow and TSS loading is accounted for in the current design through 2044 through analysis and some process improvements. As well as, include a preliminary evaluation and schedule for expanding the WWTP to increase capacity by the early to mid 2040's. With respect to rerating flow, the influent screen, clarification, and disinfection are currently limiting. Disinfection and screening are discussed later herein. The biological process secondary clarification is also limiting for TSS based on the 2016 WWTP Upgrades design criteria. For clarification rerating, the City can prepare a study that includes modeling, state point analysis, and testing as well as references to industry standard design parameter. Reasoning behind initially pursuing this approach is the clarification design parameters through 2045 are well or below standard peak design ranges for the WWTP's biological process. Additionally, the Puget Sound Nutrient Source Reduction Project, headed by the Department of Ecology (Ecology), is beginning to impose nitrogen limitations on direct discharges to the Puget Sound and tributary dischargers will be next. This should be evaluated at the same time as nutrient removal is likely to be imposed prior to the next capacity increasing WWTP expansion project and needs to be planned for.
- The existing chlorine contact tank (CCT) volume will not meet the required 20 and 60 minutes of contact time at projected peak and average annual flow rates, respectively, through the planning period. The peak hour flow rate is projected to be exceeded first in 2028. Based on an alternative analysis it is recommended that Everson switch from chlorine disinfection to ultraviolet (UV) light disinfection to avoid the need to expand the tank and to meet the compliance issue discussed in Chapter 8 based on the alternatives analysis. UV disinfection is almost instantaneous, so no contact basin is required. UV disinfection also avoids the need to add chemicals for dechlorination and the safety requirements associated with handling chemicals. The UV installation will require an engineering report prior to design and implementation. Based on discussions with the City, it is recommended to include an alternatives evaluation for utilizing peracetic acid (PAA) during preliminary design. PAA is beneficial from the perspective that operational volume would likely not need to increase. However, materials compatibility is different than chlorine so a more in-depth analysis of impacts to existing components is required and beyond this plan. Additionally, it is recommended the City conduct a pilot test to help determine dosing rates and subsequent operating costs as this information is not as widely documented and accepted in comparison to chlorine.
- Flows will exceed the headworks screen in 2041; however, the City desires to add a new screen to the headworks sooner due to the existing screen's historical performance, on-going issues, and services constraints. Since this improvement is not required in the near term, selection is assumed to occur during the previously recommended WWTP study and then installation sometime by the mid 2030's.

## ES.5 Collection System Improvements

Two gravity sewer mains were determined to exceed capacity within the near-term planning period. The gravity sewer mains are the East Main Street Collector that serves east Everson Mini-Basin 4 and the City of Nooksack; as well as, the Everson Road collector in Everson's Mini-Basin 6 that serves all basins south of the Nooksack River. The 2012 GSP identified extending the Nooksack Garfield pump station force main to the Pump Station No. 4 - Interceptor as a means to relieve hydraulic pressure on this portion of the gravity system. This is still an option, but this plan proposes moving the Interceptor pump station out of the floodway and locating it east in the City of Nooksack allowing for removal of gravity mains and the pump station from the floodway while relieving East Main Street capacity issues. At this time, relocation is the preferred option.

Pump Station No. 8 – Reed's Lane, Pump Station No. 10 – Maple Ridge, and Pump Station 13 – Hawk's Landing are the only pump stations that were identified as having existing insufficient peak hour capacity and will need to be upgraded with higher capacity pumps but in the long-term planning period.

In addition to improvements based on capacity deficiencies, many of the pump stations in the sewer system will require rehabilitation over the planning horizon due to anticipated obsolescence. Specifically, Pump Stations 5, 6, 7, 8, and 10 are identified for mechanical replacement in the near-term planning period.

It is also recommended to install magnetic flow meters to improve collection system flow monitoring. The City should consider installing these when rehabilitating the pump stations but it is not required. The flow meters are of particular importance because they can aid in identifying infiltration and inflow issues. Additionally, the cities would benefit from having detailed and accurate flow data for determining actual flow split and cost sharing. Furthermore, based on the existing flow uncertainties due to lack of adequate flow monitoring data (hourly flow data, infiltration and inflow data, etc.), it is recommended that a detailed flow study also be performed. The flow study should include an evaluation of the actual pump capacities at each pump station, flow monitoring to determine infiltration and inflow from mini-basins served, and hourly flow measurement at the WWTP and at each pump station. Ideally this would occur after installation of the flow meters but other options can include a combination of pump station draw down testing, pump station run times, and/or temporary gravity main flow meters.

Table ES-3 lists the collection system improvements through the planning period.

**Table ES-3**
**Opinion of Probable Costs of Collection System Improvements**

| Capital Improvement | CIP Year | Construction (2025 dollars) | Project (2025 dollars) | City of Everson Share of Cost (2025 dollars) |
|---|---|---|---|---|
| **Pump Station Capital Improvements** | | | | |
| Flow Meter Installation Program | Long-Term | $783,000 | $999,000 | $999,000 |
| PS 5 Mechanical Replacement | Near-Term | $178,000 | $235,000 | $235,000 |
| PS 6 Mechanical Replacement | 2031 | $178,000 | $235,000 | $235,000 |
| PS 7 Mechanical Replacement | Near-Term | $178,000 | $235,000 | $235,000 |
| PS 8 Mechanical Replacement/Upgrade | Near-Term | $178,000 | $235,000 | $235,000 |
| PS 10 Mechanical Replacement, Except Pumps | Near-Term | $111,000 | $147,000 | $147,000 |
| PS 11 Mechanical replacement/upgrade | 2036 | $178,000 | $235,000 | $235,000 |
| Southwest Mini-Basin PS and Force Main | N/A | -- | -- | -- |
| **Pump Station Sub-Totals** | | **$1,814,000** | **$2,361,000** | **$2,361,000** |
| **Collection System Piping Capital Improvements** | | | | |
| PS 4 Relocation Design | 2026 | -- | $703,000 | $235,000 |
| PS 4 Relocation Construction | 2027 | $3,937,000 | $4,533,000 | $1,511,000 |
| Mini Basin 6 Sewer Improvements Design | 2028 | -- | $372,000 | $372,000 |
| Mini-Basin 6 Sewer Improvements Construction | 2029 | $1,746,000 | $1,968,000 | $1,968,000 |
| Flow Monitoring Study | Long-Term | -- | $80,000 | $40,000 |
| Southwest mini-basin Collector | N/A | -- | -- | -- |
| **Collection System Piping Subtotal** | | **$5,683,000** | **$7,656,000** | **$4,126,000** |
| **Estimated Total Cost** | | **$7,497,000** | **$10,017,000** | **$6,487,000** |

## ES.6 WWTP Improvements

The WWTP was evaluated to identify improvements needed during the planning period. Existing treatment capacity was determined to be sufficient for flow and BOD based on design but TSS loading as discussed should be further evaluated in addition to future nitrogen limit impacts. Table ES-4 provides a summary of the WWTP improvements.

**Table ES-4**
**Summary of Proposed Wastewater Treatment Plant Upgrades**

| Year Required | Improvement | OPPC (2025 Dollars) | Everson's Share of Cost (2025 Dollars) |
|---|---|---|---|
| 2028 | UV Disinfection | $1,390,000 | $927,000 |
| 2031 | WWTP Study | $250,000 | $167,000 |
| 2032 - 2036 | Headworks Screen | $508,000 | $339,000 |
| 2032 - 2045 | Coagulation/Flocculation Facility | $522,000 | $348,000 |
| 2032 - 2045 | Effluent Filter | $1,040,000 | $694,000 |
| 2032 - 2045 | Reclaimed Water System | $1,518,000 | $1,012,000 |
| Early 2040's | WWTP Expansion Project | $6.8 to 8.1 million | $4.4 to 5.4 million |
| | **Total Estimated Costs** | **$11.8 to 13.1 million** | **$7.9 to 8.9 million** |

## ES.7 Wastewater Reuse

RCW 90.48.112 requires consideration of reclaimed water in wastewater plans. Although the law does not specifically require implementation of a reclaimed water alternative, it strongly encourages it. RCW 90.46.005 states in part that to the extent that reclaimed water is appropriate for beneficial uses, it should be so used to preserve potable water for drinking purposes.

Uses of reclaimed water throughout the City were examined. The most viable use is as a substitute for irrigation water in the Riverside Community Park.

The upgrades required to make this a reclaimed water treatment and distribution facility are:

- Add new chemical coagulation and flocculation facilities.
- Add a packaged effluent filter at the plant.
- Upgrade the disinfection facilities, as discussed in Section 8.3.7.
- Storage tank and booster pump located at the WWTP.

The facilities described above will produce Class A reclaimed water at a total project cost of approximately $3,080,000. A lower class of water can be produced at modestly lower capital costs; however, lower quality water typically translates to less public acceptance and fewer opportunities for use. Conceptual planning should be based on the reuse concept most likely to gain public acceptance and support.

## ES.8 Capital Costs Summary

The wastewater capital improvement program (CIP) is organized into two parts; 1) Immediate improvements to be initiated during the next six years, 2026 through 2031 and 2) Long range improvements will be implemented during following years on a flexible schedule as determined by the actual capacity needs of the sewer system and mechanical replacement needs.

Based on the CIP, the assumption was made that the City would fund the larger costs improvements with loans either as municipal bonds, or in combination with outside funding (e.g., State Revolving Fund loans, Public Works Trust Fund loans, Community Development Block Grants, etc.). Additionally, that the sewer would institute a latecomers program for the Mini-Basin 6 Everson Road collector improvement. A summary per year of the costs of the capital improvements is presented graphically in Figure ES-1.

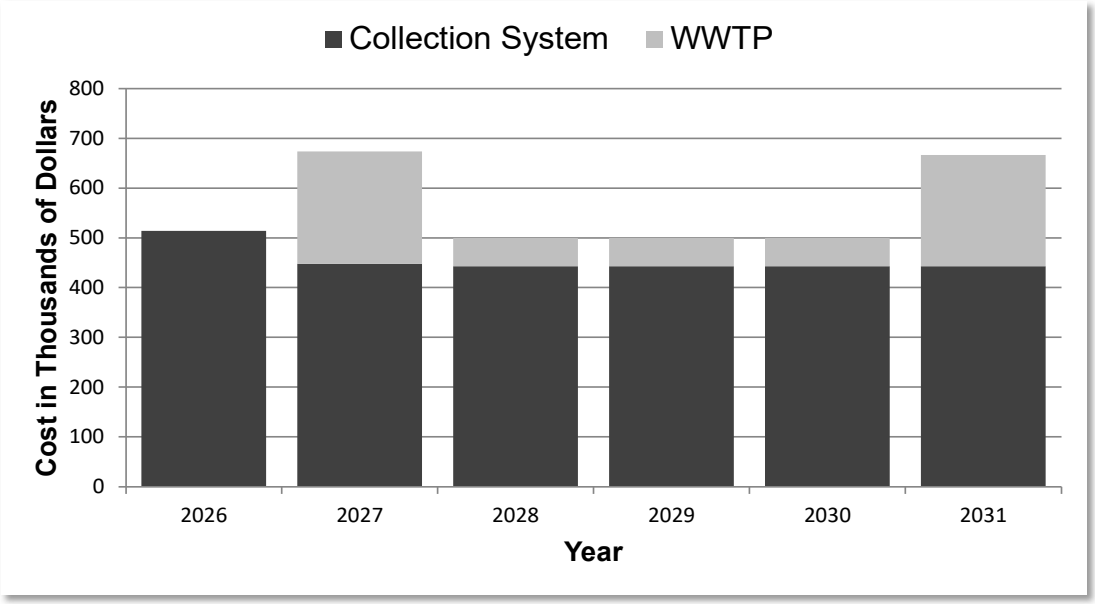


**Figure ES-1 Capital Improvements – 2026 through 2031**

## ES.9 Financial Implications

Table ES-5 shows the financial implications for the assumptions made herein. This includes the planned 2026 through 2031 CIP with funding at 2% interest rate for the PS 4 relocation, Mini-Basin 6, and UV disinfection improvements. There are no known planned sewer service charges or connection charges increases which accounts for the net revenue. Additionally, The operating costs for the sewer fluctuated from 2020 through 2023; therefore, operating expenses were average and then projected to increase on average about 5 percent annually as shown in ES-5 and debt obligation for the 2016 WWTP upgrades are still being paid and included.

## Table ES-5
## Projected Net Revenue

| Projection | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|
| Dwellings | 1,164 | 1,191 | 1,218 | 1,244 | 1,271 | 1,298 |
| Rate | $80 | $80 | $80 | $80 | $80 | $80 |
| Revenue | $1,264,480 | $1,290,240 | $1,316,000 | $1,341,760 | $1,367,520 | $1,393,280 |
| Expenditures | ($962,609) | ($1,010,739) | ($1,061,276) | ($1,114,340) | ($1,170,057) | ($1,228,560) |
| Debt Obligation | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) |
| CIP | ($529,420) | ($714,408) | ($545,820) | ($562,195) | ($579,061) | ($795,839) |
| **Net Revenue** | **($428,645)** | **($636,003)** | **($492,192)** | **($535,871)** | **($582,694)** | **($832,215)** |
| **Cumulative Net Revenue** | **($428,645)** | **($1,064,648)** | **($1,556,841)** | **($2,092,711)** | **($2,675,405)** | **($3,507,620)** |

Due to the negative net revenue, various scenarios to balance the six-year CIP were evaluated. One scenario to demonstrate relative scale of costs impacts is presented herein but the City should consider executing a rate study, these costs are not included in the CIP. The following scenario includes; increasing the standard connection charge fees from $6,400 to $8,000, impose an annual 8.5 percent increase through 2031 and impose a latecomer's agreement on Mini-Basin 6 new dischargers of approximately $6,460 per connection to recover construction costs and professional services during construction. These changes can balance the budget over the six year period, but requires carrying a significant amount of debt into the long-term planning period. The projected net revenue including the $8,000 connection charge, the 9.1 percent rate increase from 2026 through 2031, and Mini-Basin 6 latecomer's agreement is presented in Table ES-6.

## Table ES-6
## Projected Net Revenue with Rate & Fee Adjustments

| Adjusted Projection | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|
| Dwellings | 1164 | 1191 | 1218 | 1244 | 1271 | 1298 |
| Rate | $87 | $95 | $104 | $113 | $124 | $135 |
| Revenue | $1,426,870 | $1,560,182 | $1,707,395 | $2,004,360 | $2,183,715 | $2,381,599 |
| Expenditures | ($962,609) | ($1,010,739) | ($1,061,276) | ($1,114,340) | ($1,170,057) | ($1,228,560) |
| Debt Obligation | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) |
| CIP | ($529,420) | ($714,408) | ($545,820) | ($562,195) | ($579,061) | ($579,061) |
| **Net Revenue** | **($266,254)** | **($366,062)** | **($100,797)** | **$126,729** | **$233,502** | **$372,883** |
| **Cumulative Net Revenue** | **($266,254)** | **($632,316)** | **($733,114)** | **($606,385)** | **($372,883)** | **($0)** |

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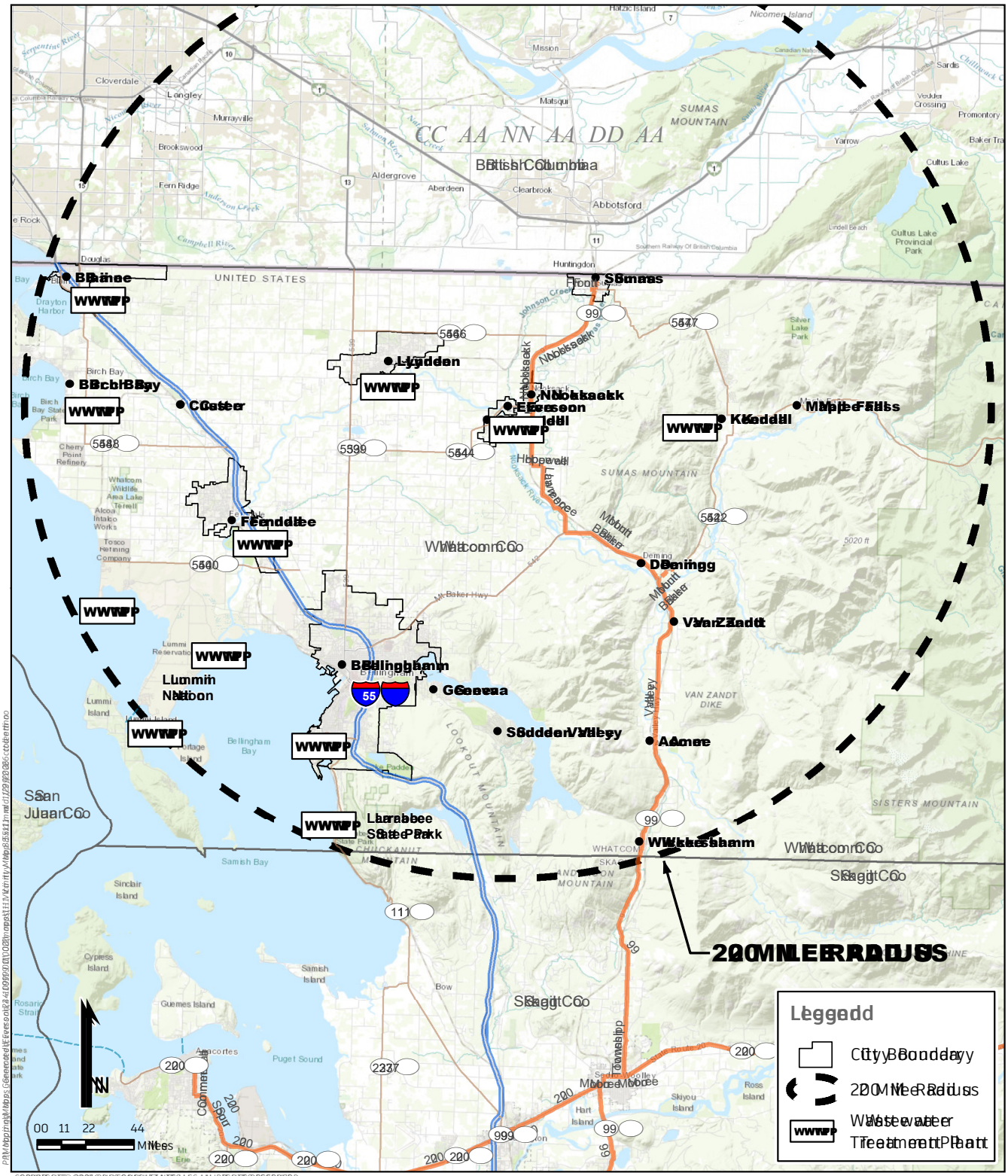


# Vicinity Map

General Sewer Plan
City of Everson, Washington
February 2026

Figure 1-1

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# Chapter 2 Service Area Characteristics

<This Chapter includes updates and amendments for Chapter 2 "Service Area Characteristics" in the *2012 General Sewer Plan (2012 GSP)*>

<The following replaces Section 2.1 "Study Area">

The Plan has been developed based on the following characteristics:

- Existing wastewater service area.
- Planned service area expansions.
- Land use assumptions.
- Population projections for the City of Everson and the City of Nooksack, and their respective Urban Growth Areas (UGA), through the year 2045.

These characteristics are used to assess existing wastewater services as well as future service needs. The existing environment within the City wastewater service area is also briefly discussed.

## 2.1 Study Area

The current wastewater service area in which the City collects sewage consists of ten mini-basins within the city limits served by nine pump stations. In 2021 the annexed approximately 103 acres in the southwest UGA and in 2023 annexed another approximately 47 acres in the same area. To date, since the 2012 GSP, development on the south side of Everson within the city limits has resulted in approximately 170 new lots. Additional residential developments planned for development within the next five years will result in approximately 440 dwelling units. All are within the current city limits. The UGA around the City has approximately 223 acres that have the potential for development. An additional UGA reserve of approximately 96 acres has also been identified by the City. The City and UGA boundaries are presented in Figure 2-1.

## 2.2 Surrounding Vicinity Characteristics

<This section has not been updated as 2012 GSP is still accurate but Figure 2-2 FEMA Floodplain & Wetlands referenced has been updated to reflect the existing City limits and UGA.>

## 2.3 Water Supply System

<This section has not been updated as 2012 GSP is still accurate but Figure 2-3 Water System referenced has been updated to reflect existing City limits, water system, and UGA.>

<The following replaces Section 2.4 "Land Use and Zoning">

## 2.4 Land Use and Zoning

### 2.4.1 Growth Management Act

The State of Washington adopted the Growth Management Act with the intent of concentrating most new development and population gains within the urban areas of the more populous and rapidly growing

counties. State and local governments are required to define an urban growth area boundary within which urban services like sewers are provided, and any new parcels created outside that boundary must be at a very low density with sufficient acreage to support on-site sewage disposal systems conforming to State Health regulations.

Only two exceptions to the prohibitions of sewers outside the urban growth boundary are recognized under state law:

- Public schools outside the urban growth boundary can be served by sewers but are not required to be served.
- Areas of existing development outside the urban growth boundary where sufficient on-site sewage disposal systems have failed as to create a "severe public health hazard" can be served by sewers.

Sewers provided in either of these cases can be satellite system limited to serving just the qualified and defined parcels, or a sewer extension can be 'tight-lined' to convey wastewater from the qualified and defined parcels into the urban growth area for connection to an existing sewer system.

### 2.4.2 Land Use and Zoning

The City of Everson boundaries and the boundary of the UGA are currently established as described in the *2026 Whatcom County Comprehensive Plan* (2026 Plan). Zoning in the City of Everson is divided into Agriculture, Commercial, Light Commercial, Multi-Use, Public, Residential, Residential-7500, and Recreational Open Space. The current zoning in the City is shown on Figure 2-4.

### 2.4.3 Recent Annexations

As noted above, the limits of the City and the UGA are established as described in the 2026 Plan and includes annexations in the south side of the City. The City by a somewhat informal consensus does not extend sewer services into the UGA. Services will be extended into the UGA after annexation and the cost of infrastructure will be negotiated between the City and the developer(s).

<The following replaces Section 2.5 "Existing Population">

## 2.5 Existing Population

According to the 2020 Census, the 2020 population of the City of Everson was 2,888. According to the 2026 Plan, the 2023 population of the City of Everson was 3,171.

<The following replaces Section 2.6 "Projected Population">

## 2.6 Projected Population and Growth

The City of Everson is projected to experience significant growth in the planning period. The population projections, based on the 2026 Plan, projects the City and respective UGAs to grow by approximately 1.7 percent annually through the planning horizon. This evaluation does not project commercial and industrial growth as employees per sewer connection is beyond this scope of this evaluation. Rather, this evaluation assumes commercial and industrial growth and subsequent demand on the City's collection system will be proportionate to population growth.

### 2.6.1 City Development

With respect to localized growth, there are several current and anticipated medium to large developments that the City is aware of. Due to various unknowns associated with the developments, e.g. financial, permitting, mitigation, schedule, etc.; the assumption utilized for projecting growth within the City limits is based on the following:

- 6-year planning period:
  - Developments recently approved, currently in permitting, or that are in the pre-application process.
  - For simplicity, the assumption applied to the final plats and preliminary plats is that 50% of each known development's parcels will be developed in the planning period.
- 20-year planning period assumes the developments in the 6-year planning are built out 90 percent.

There is potential that additional development may occur in the city limits, but the anticipation is this will be limited and dispersed. Most of these properties are smaller, partially or entirely in the floodplain, and would support a minor increase in dwellings. The Nooksack River special flood hazards areas are also projected to expand based on the recent September 2025 revised draft FEMA flood maps. Additionally, the current property owners have elected to not develop or subdivide during the recent increased housing demand; this course of action is anticipated to continue. Based on these considerations, it is assumed the known developments best represent foreseeable future development.

### 2.6.2 Urban Growth Areas

Given the assumptions above, the City will need to expand into the UGA within the planning period. Preliminary number suggests approximately 77 dwellings or 218 people. The City assumes that most growth of this growth will be concentrated in the east and south/southwest UGAs based on properties being out of the flood hazard areas and current property owner development interest.

### 2.6.3 Population Projections

Table 2-1 provides a summary of the population and employment projections through the planning horizon.

**Table 2-1**
**City of Everson and UGA Projections**

| Year | Total Population | Total Employment | Source |
|---|---|---|---|
| 2023 | 3,171 | 943 | 2026 Plan for both |
| 2031 | 3,683 | 1,162 | Interpolation of 2026 Plan for both |
| 2045 | 4,579 | 1,545 | 2026 Plan for both |

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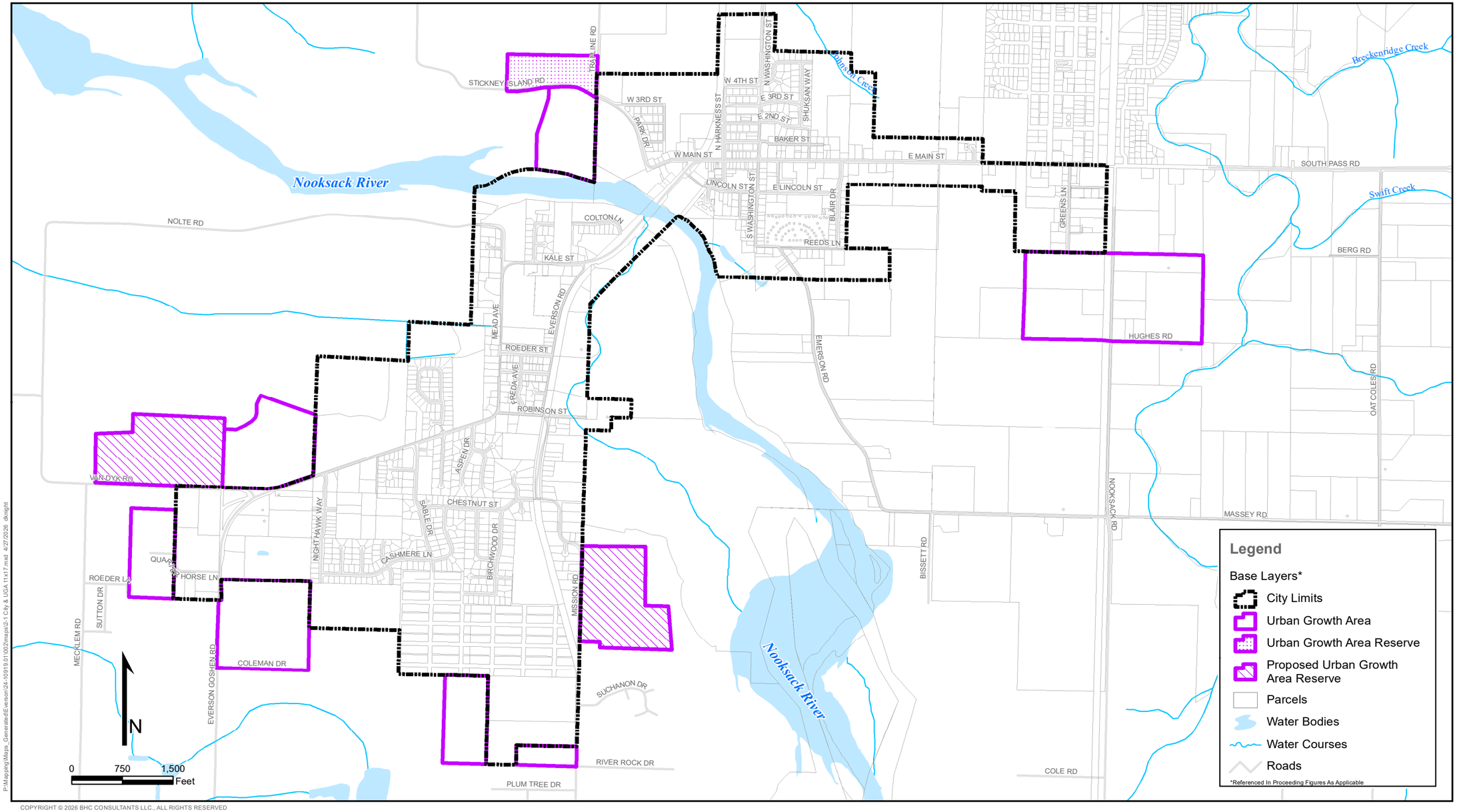




GIS Data: City of Everson & Whatcom County.
Data sources supplied may not reflect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

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## City and UGA Boundaries

General Sewer Plan
City of Everson, Washington
April 2026

Figure 2-1

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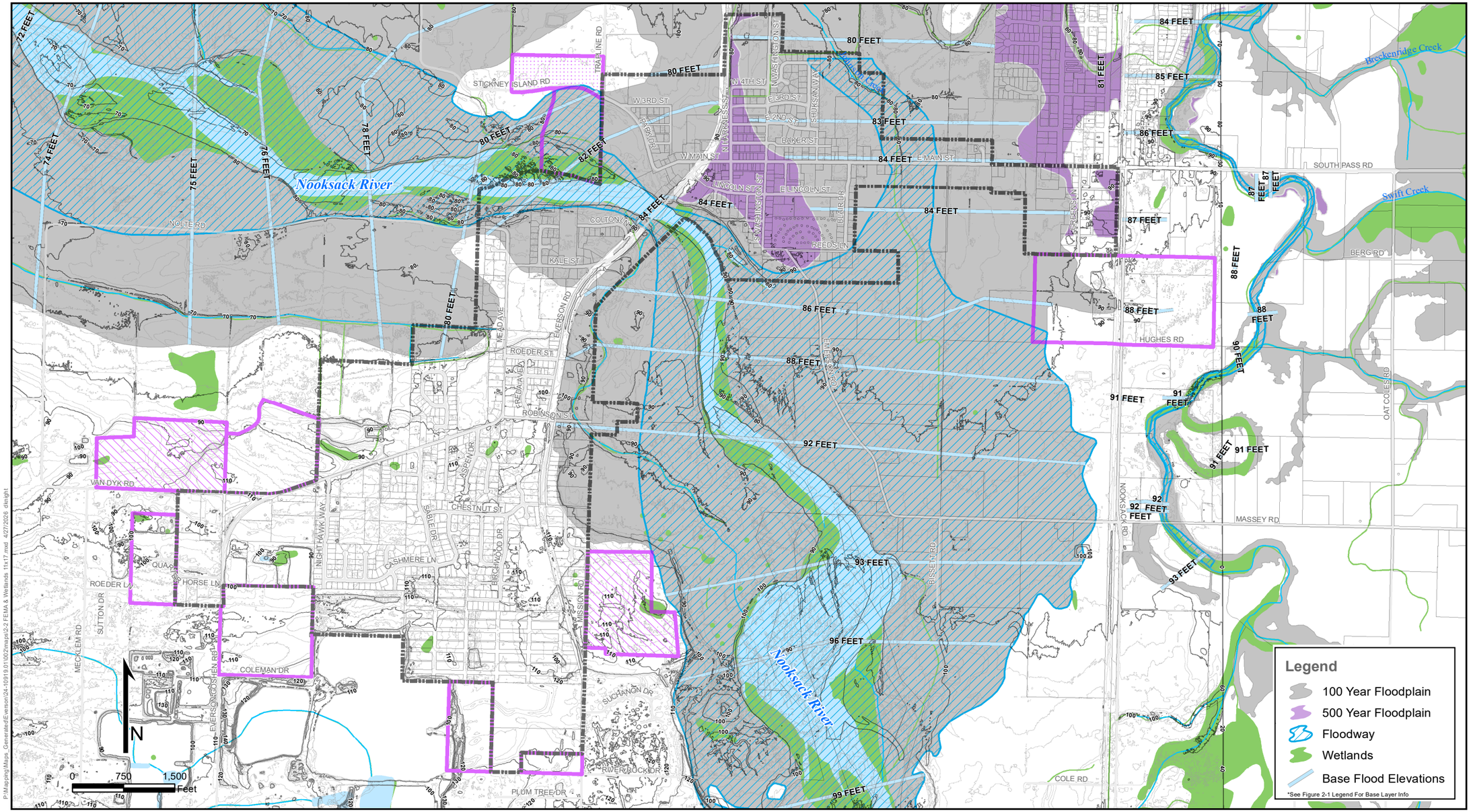




GIS Data: Flood: FEMA. Wetlands: National Wetland Inventory
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## FEMA Floodplain and Wetlands

General Sewer Plan
City of Everson, Washington
April 2026

Figure 2-2

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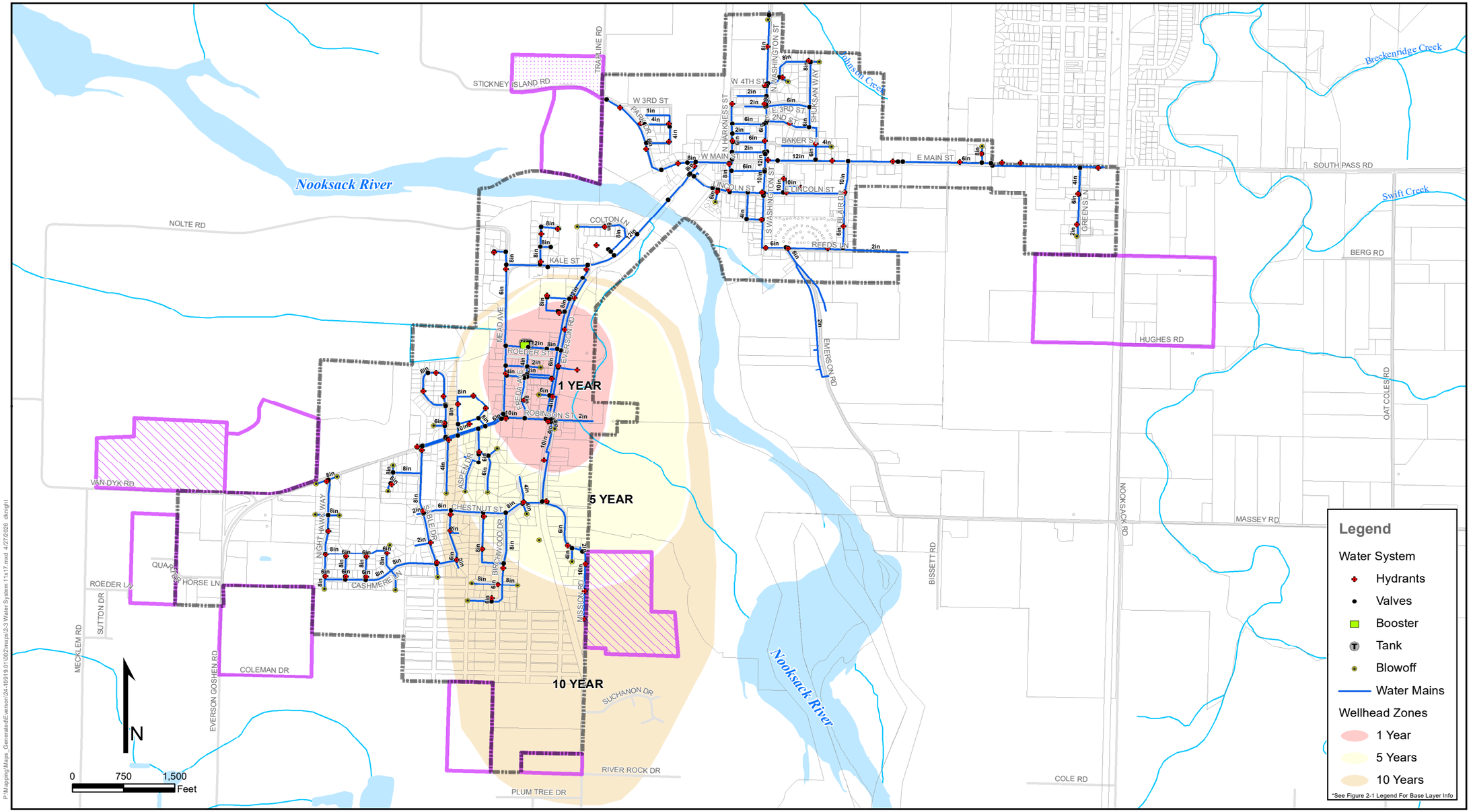


P:\Mapping\Maps_General\EvGSP\24-101\9.01\002\maps\2-3 Water System 11x17.mxd 4/27/2026 dknight



GIS Data: City of Everson & Whatcom County.
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## Water System

General Sewer Plan
City of Everson, Washington
April 2026

Figure **2-3**

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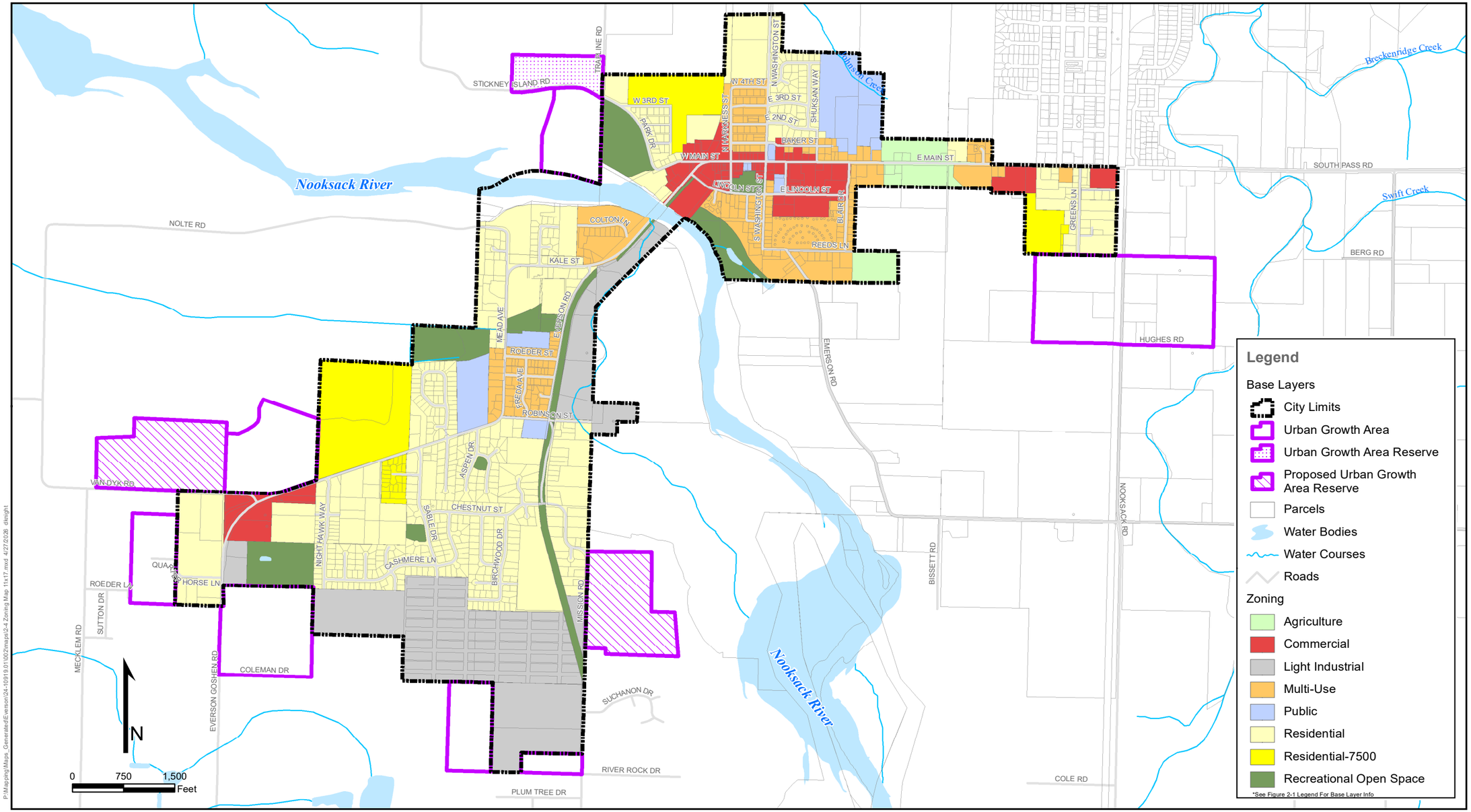


P:\Mapping\Maps_Generals\Everson\24-10918.01\02\maps\2-4 Zoning Map 11x17.mxd 4/27/2026 dknight



GIS Data: City of Everson & Whatcom County.
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## Current Zoning Map

General Sewer Plan
City of Everson, Washington
February 2026

Figure 2-4

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# Chapter 3 Existing Wastewater Facilities

<The following replaces Chapter 3 "Existing Wastewater Facilities" in the *2012 General Sewer Plan* (2012 GSP) in its entirety>

## 3.1 Collection and Conveyance Facilities

The existing wastewater collection and conveyance system is comprised of gravity lines, force mains, and nine operating lift stations. The collection system (including pipes, pumps, manholes, and clean outs) is shown in Figure 3-1. The Everson collection system is mostly asbestos cement pipe.

### 3.1.1 Gravity Sewer

Gravity sewer pipes in the Everson collection system range in size from 6-inch to 15-inch in diameter. There is approximately 10.5 miles of pipe in the collection system. Because the City of Everson is built on relatively flat terrain, most of the collection system is constructed using the minimum slope recommended by the Department of Ecology. There are instances in the collection system where the slope is less than the current minimum recommendation because the sewer pipes were installed in 1971. The sewer pipe inventory is summarized in Table 3-1 below; pipe lengths are approximated from GIS data provided by the City. Appendix D includes the slope, diameter, and capacity of the hydraulically modeled trunk sewer segments.

**Table 3-1**
**Gravity Pipe Inventory**

| Pipe Diameter (inches) | Total Length (feet) |
|---|---|
| 6 | 608 |
| 8 | 52,384 |
| 10 | 1,025 |
| 12 | 1,015[(1)] |
| 15 | 70 |
| **Total Length** | **54,087** |

Note:
1) WWTP Treated Effluent Outfall discharges by gravity or force main.

### 3.1.2 Pump Stations

The existing wastewater collection system includes nine lift stations in the collection system and two lift stations at the Everson Wastewater Treatment Plant (WWTP) as shown in Figure 3-1. Table 3-2 shows pump stations corresponding to collection basins, number of pumps, and the capacity of the pumps. Basin T wastewater flows by gravity to the WWTP.

In addition, all lift stations telemetry monitoring pump run times and are linked to the SCADA (Supervisory Control And Data Acquisition) system at the treatment plant.

**Table 3-2**
**Everson Pump Stations**

| Pump Station | Location | Capacity (gpm) | No. of Pumps | Pump HP | Mini-Basins Served |
|---|---|---|---|---|---|
| 4 – Interceptor | 506 E. Main | 500 | 2 | 20 | 4, City of Nooksack |
| 5 – Jim & Dave's | 103 E. Main | 225 | 2 | 3 | 5, 9 |
| 6 – Bridge | 208 Everson Road | 720 | 2 | 10 | 6, 10, 11 |
| 7 – Lincoln | 401 Lincoln Street | 350 | 2 | 5, 3 | 5, 8, 9 |
| 8 – Reeds | 102 Reeds Lane | 60 | 2 | 1.5 | 8 |
| 9 – Evergreen | Evergreen Way | 60 | 2 | 3 | 9 |
| 10 – Robinson | 605 Robinson Street | 350 | 2 | 3 | 10 |
| 11 – Maple Ridge | Maple Ridge | 60 | 2 | 5 | 11 |
| 13 – Hawks Landing | Hawks Landing | 100 | 2 | 5 | 13 |
| Influent Pump Station | WWTP | 1,150 | 2/1 | 10/6.5 | ALL |
| Effluent Pump Station | WWTP | 1,150 | 2 | 10 | ALL |

### 3.1.3 Force Mains

The Everson wastewater conveyance system has approximately 8,430 feet of force mains of 2-, 3-, 4-, 6-, 8-, and 12-inch pipe for conveying wastewater to the treatment plant or to gravity conveyance sections of the system. Additionally, the City has allowed for common force mains to facilitate grinder pump developments. Pipe lengths are approximated from GIS data and as-builts provided by the City. The pump station and common grinder pump force mains are summarized in Table 3-3 below and are shown in Figure 3-1.

**Table 3-3**
**Everson Force Mains**

| Pump Station | Diameter (inches) | Length (ft) | Grinder Pumps |
|---|---|---|---|
| 4 – Interceptor | 6 | 3,600 | |
| 5 – Jim & Dave's | 8 | Lift Station | |
| 6 – Bridge | 6 | 1,205 | |
| 7 – Lincoln | 8 | Lift Station | |
| 8 – Reeds | 8 | Lift Station | |
| 9 – Evergreen | 4 | 659 | |
| 10 – Robinson | 6 | 60 | |
| 11 – Maple Ridge | 4 | 1,133 | |
| 13 – Hawks Landing | 4 | 680 | |
| WWTP Influent Pump Station | 8 | 75 | |
| WWTP Effluent Pump Station | 12 | 1,015 | |
| Falcon Lane Development | 3<br>2 | 364<br>435 | 18 |
| Sable Drive Development | 3<br>2 | 92<br>997 | 16 |
| Night Hawk Way Development | 3<br>2 | 475<br>456 | 22 |
| Sisters Court Development | (1) | (1) | 4 |

Note:
1) Side sewer laterals only.

## 3.2 Wastewater Treatment Plant

The Everson Wastewater Treatment Plant (WWTP) is an extended aeration secondary treatment plant using oxidation ditches. Sludge is collected from clarifiers after treatment in the oxidation ditches and pumped to a holding tank. A rotary drum thickener provides recuperative thickening of sludge prior to hauling. After thickening the sludge is transported to Tjoelker Farms for further treatment and commercial land application. The effluent is treated with chlorine, and after dechlorination, is discharged into the Nooksack River.

### 3.2.1 Description of WWTP Processes

Wastewater generated within the cities of Everson and Nooksack is collected in a gravity sewer system and conveyed through force mains and gravity sewers to the Everson WWTP. A site plan of the existing WWTP is shown on Figure 3-2.

The existing WWTP consist of the Influent Pump Station that conveys raw sewage to the influent intake structure with screening and grit removal. The wastewater proceeds through a two-stage biological selector that aids in enhancing settleability of the process steam. Discharge from the selector proceeds to biological treatment in two parallel oxidation ditches that facilitate the removal of biochemical oxygen demand (BOD) by the oxidation of organic materials through an aerobic process. After oxidation the biologically treated waste stream is settled in two parallel clarifiers where settled solids (sludge) are pumped from the clarifiers for further handing that consists of thickening before hauling and land application. After the waste stream has been settled in the clarifiers it flows by gravity to a chlorine contact tank for disinfection by sodium hypochlorite addition and dechlorination by sodium metabisulfite. The treated dechlorinated effluent is then discharged by gravity or pumped to the Nooksack River outfall for final disposal. The existing WWTP process schematic is presented in Figure 3-3.

## 3.3 Outfall & Receiving Waters

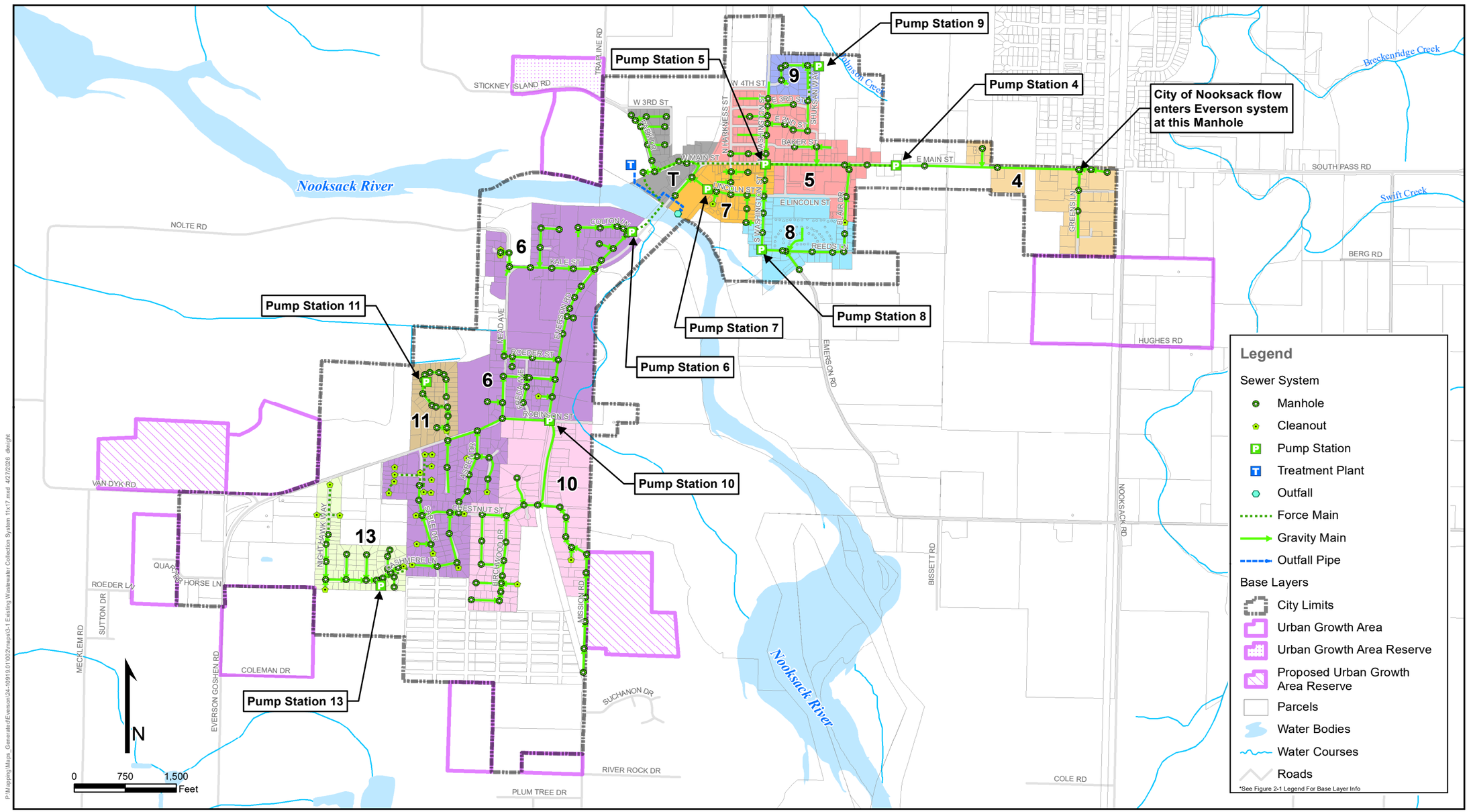
The outfall is comprised of a 12-inch pipe that discharges from a single-port side-bank diffuser into the Nooksack River. As noted in Chapter 2, the river is an impaired water body due to fecal coliform bacteria and turbidity. Additionally, the river is very dynamic as water surface elevation can change from essentially the riverbed at ~ 68 feet to the 100-year flood elevation of 84 feet. The treatment plant typically discharges to the river by gravity flow through a 12-inch pipeline. When the river rises above 74.5 feet the effluent can no longer flow by gravity and must be pumped. Effluent is pumped into the gravity main which doubles as a force main. The Effluent Pump Station was rehabbed in 2014 and the outfall was relocated and extended upstream approximately 275 feet along the river bank in 2015.

## 3.4 Sludge Processing

Sludge produced at the WWTP is normally pumped from the bottom of the clarifiers as return activated sludge (RAS) to the influent structure, or as waste activated sludge (WAS) to the sludge holding tank. The sludge holding tank includes a recuperative thickening process with a rotary drum thickener and can produce up to approximately four percent solids sludge prior to final disposal. After thickening, the sludge is transported to Tjoelker Farms for further treatment and commercial land application. Tjoelker Farms is responsible for permitting and reporting requirements. The City of Everson does not test for pathogens or vector attraction and reduction, pollutants and inert material associated with the sludge.

## 3.5 Green Infrastructure

There is no Green Infrastructure within the City of Everson and its UGA specifically associated with the City's sanitary sewer system.




P:\Mapping\Maps_Generated\Everson\24-109\9.0\100\2\maps\3-1 Existing Wastewater Collection System 11x17.mxd 4/27/2026 dwright



GIS Data: City of Everson & Whatcom County.
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**Existing Wastewater Collection System**

General Sewer Plan
City of Everson, Washington
April 2026

Figure

**3-1**

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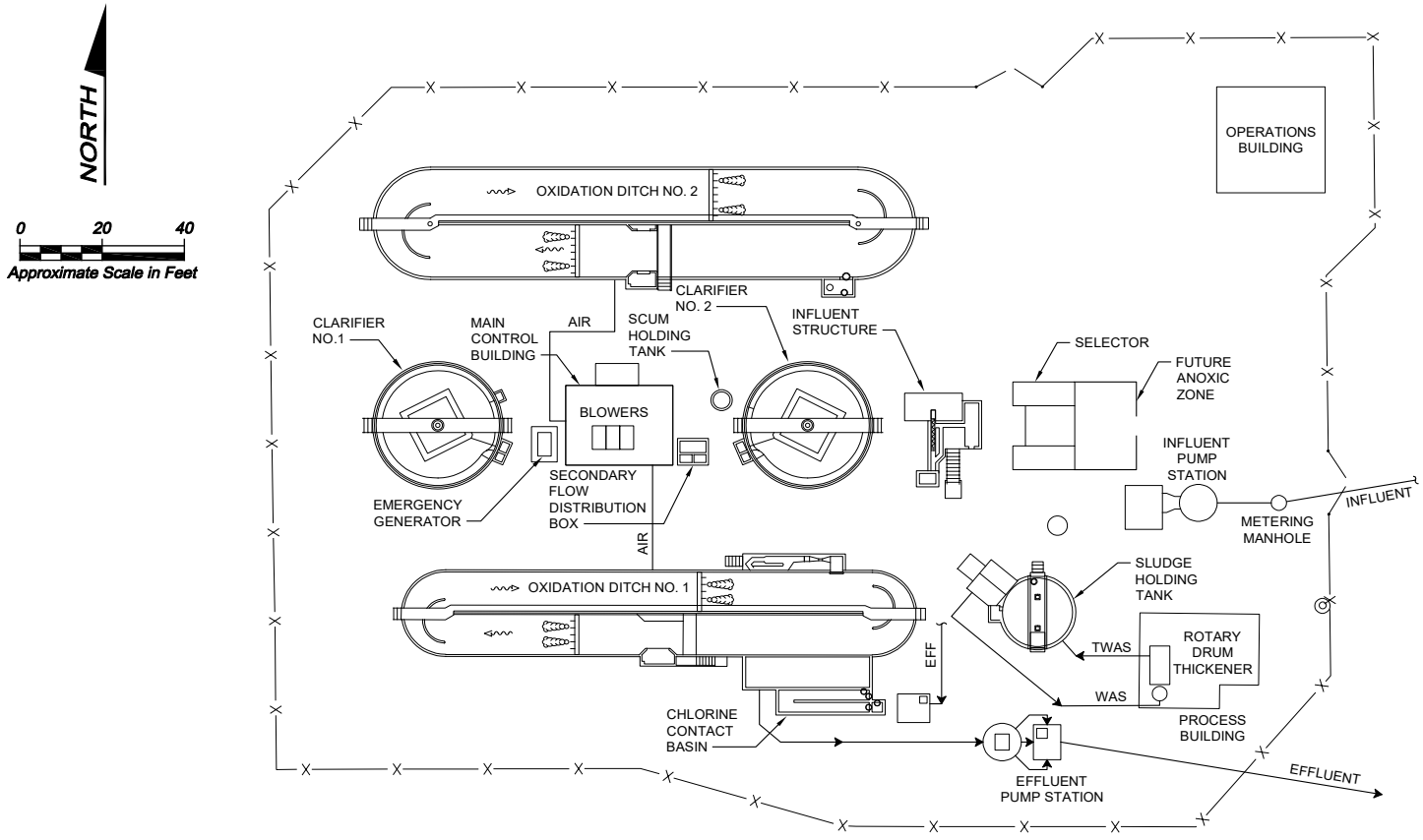



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**Existing WWTP Site Plan**

General Sewer Plan
February 2026

Figure
**3-2**

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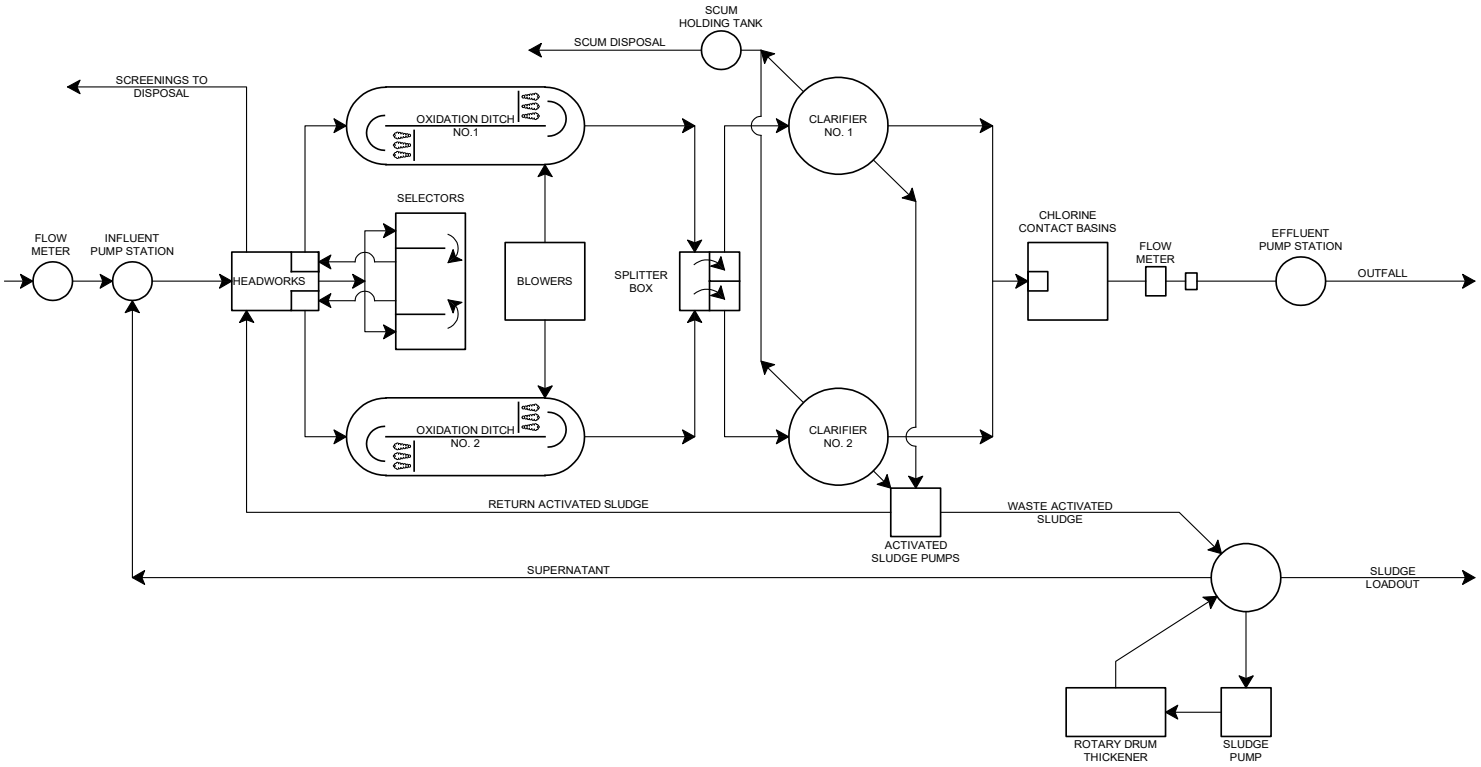



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**Existing WWTP Process Schematic**
General Sewer Plan
February 2026

Figure
**3-3**

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# Chapter 4 Wastewater Flow Characteristics

<The following replaces Chapter 4 "Wastewater Flow Characteristics" in the *2012 General Sewer Plan* (2012 GSP) except sections as noted herein>

This section analyzes influent and effluent wastewater flow data recorded at the Everson Wastewater Treatment Plant (WWTP) for the years of 2020 through 2023. Daily monitoring reports (DMR's) provide daily flow and loading values for the WWTP and resulting effluent. The DMR's are in Appendix B. Current plant influent characteristics as well as current and future population projections are evaluated to project future treatment flows and loadings.

Future wastewater flow projections are directly related to the growth projections discussed in Chapter 2. Future sanitary flow projections through 2045 are based on future population growth. Projected wastewater flows for the collection system mini-basins were calculated using the modeling analysis presented in Chapter 5.

## 4.1 Existing Wastewater Flows

Daily wastewater flow through the WWTP is measured by an ultrasonic flow meter over a v-notch weir after treatment and just before discharging to the Nooksack River. The influent flow is measured by an ultrasonic flow meter and Parshall flume upstream of the WWTP's Influent Pump Station. Some flow attenuation occurs in the treatment process and in the collection system, but this attenuation is considered minor and is normalized in the monthly flow averages.

Note, the flow data from the following dates are omitted from the analysis; November 14 – 17, 2021, and November 28 – 29, 2021. Flow data collected on these days were erroneous for significant durations, if not the entire day, as the WWTP flow measuring devices and instrumentation was submerged and not in a hydraulically free flowing state.

### 4.1.1 Annual Average Day Flow

Table 4-1 presents annual average wastewater flow characteristics recorded at the WWTP during the years 2020 through 2023. The population served by the WWTP includes both the City of Everson and the City of Nooksack.

**Table 4-1**
**Annual Average Flow Characteristics**

| Year | WWTP Flow (mgd) | Everson Population | Nooksack Population | Total Population | Per Capita (gpcd) |
|---|---|---|---|---|---|
| 2020 | 0.314 | 2,888 | 1,471 | 4,359 | 72 |
| 2021 | 0.315 | 2,935 | 1,515 | 4,450 | 71 |
| 2022 | 0.298 | 3,060 | 1,560 | 4,620 | 64 |
| 2023 | 0.273 | 3,171 | 1,573 | 4,744 | 58 |
| **Average** | **0.300** | **N/A** | **N/A** | **N/A** | **66.2** |

Table 4-1 includes flow from residential, commercial, institutional, and inflow and infiltration. The 66 gpcd is comparable to other communities. For comparison, the 2012 GSP had contributions by the communities to the WWTP at a flow of 75 gpcd.

### 4.1.2 Monthly Average Day Flow

Table 4-2 summarizes the monthly average flow measured at the WWTP over the four-year period from 2020 through 2023.

**Table 4-2**
**Monthly Average Daily Flow Summary (2021-2023)**

| Month/Year | Flow (MGD) | | | |
|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 |
| January | 0.442 | 0.403 | 0.436 | 0.346 |
| February | 0.421 | 0.393 | 0.318 | 0.300 |
| March | 0.314 | 0.294 | 0.346 | 0.277 |
| April | 0.288 | 0.273 | 0.290 | 0.270 |
| May | 0.279 | 0.260 | 0.285 | 0.264 |
| June | 0.293 | 0.255 | 0.315 | 0.242 |
| July | 0.267 | 0.245 | 0.258 | 0.237 |
| August | 0.247 | 0.241 | 0.245 | 0.233 |
| September | 0.244 | 0.241 | 0.241 | 0.235 |
| October | 0.254 | 0.268 | 0.242 | 0.240 |
| November | 0.327 | 0.467 | 0.264 | 0.277 |
| December | 0.392 | 0.437 | 0.333 | 0.361 |
| **Annual Average** | 0.314 | 0.315 | 0.298 | 0.273 |

The general trend reflected in Table 4-2 is an approximate 13 percent decrease in wastewater flow over the four years, while population increased by approximately 9 percent. The decrease appears to be reflective of rainfall.

### 4.1.3 Peak Month and Peak Day

Table **4-3** presents peak month and peak day flows recorded at the WWTP from 2020 through 2023.

**Table 4-3**
**Wastewater Treatment Plant Peak Flows (2020 – 2023)**

| Year | Peak Month (MGD) | Month | Peak Day (MGD) | Month |
|---|---|---|---|---|
| 2020 | 0.442 | January | 0.875 | January |
| 2021 | 0.467 | November | 1.042 | November |
| 2022 | 0.436 | January | 0.848 | January |
| 2023 | 0.361 | December | 0.511 | December |
| **Average** | **0.426** | | **0.819** | |

## 4.2 Domestic Wastewater

An estimate of the existing domestic wastewater flow component is derived in the following paragraphs.

### 4.2.1 Water Use Data

<This section has not been updated as 2012 GSP is still accurate>

### 4.2.2 Domestic Flow Peaking Factors

An average annual flow of 0.300 mgd was observed from the WWTP flow records for the period from 2020 through 2023. This flow rate includes wastewater from all sources and the effects of increasing flows from population growth, as well as the average annual infiltration inflow component. To project future peak month wastewater flows, a peaking factor is often used. Peak month peaking factors are calculated by taking the peak month flow for a particular year and dividing it by the annual average flow for that year. Table 4-5 presents the derivation of the peaking factor for peak month domestic flow.

**Table 4-5**
**Peak Month Domestic Flow Peaking Factors**

| Year | Annual Average Flow (MGD) | Peak Month Flow (MGD) | Peak Month Peaking Factor |
|---|---|---|---|
| 2020 | 0.314 | 0.442 | 1.41 |
| 2021 | 0.315 | 0.467 | 1.48 |
| 2022 | 0.298 | 0.436 | 1.46 |
| 2023 | 0.273 | 0.361 | 1.32 |
| **Average** | **0.300** | **-** | **-** |
| **Maximum** | **-** | **-** | **1.48** |

The maximum peak month flow peaking factor of 1.48 was derived for total domestic wastewater flow.

Table 4-6 presents the derivation for the peaking factor for peak day domestic flow.

**Table 4-6**
**Peak Day Domestic Flow Peaking Factors**

| Year | Annual Average (MGD) | Peak Day (MGD) | Peak Day Peaking Factor |
|---|---|---|---|
| 2020 | 0.314 | 0.875 | 2.79 |
| 2021 | 0.315 | 1.042 | 3.31 |
| 2022 | 0.298 | 0.848 | 2.85 |
| 2023 | 0.273 | 0.511 | 1.87 |
| **Average** | **0.300** | **-** | **-** |
| **Maximum** | **-** | **-** | **3.31** |

A peak day peaking factor of 3.31 was derived for total domestic wastewater flow.

## 4.3 Infiltration and Inflow Analysis

Infiltration is the wastewater component associated with groundwater seepage into the sewer system through loose connections and cracked or broken sewer lines. Higher infiltration flows are observed during wet weather months when groundwater is higher due to soil saturation.

Rain-dependent infiltration/inflow (RDII) is the wastewater component consisting of stormwater surface runoff entering the sewer system plus additional infiltration from storm-saturated ground conditions. Typical sources of inflow include storm sewer connections, basement sump pumps, roof drains and submerged manholes. However, increased infiltration also occurs as precipitation saturates the ground and higher groundwater more easily leaks into the pipe system.

### 4.3.1 Previous Investigations

<This section has not been updated as 2012 GSP is still accurate>

### 4.3.2 Infiltration

The EPA publication 'Infiltration/Inflow – I/I Analysis and Project Certification' dated May 1985 was reissued by the Department of Ecology as Ecology Publication No. 97-03. This publication established that the following thresholds for possibly excessive dry weather infiltration and inflow:

- If average dry weather flow is less than 120 gpcd, infiltration is non-excessive. The definition of infiltration per US EPA Publication No. 97-03 is flow exceeding 120 gallons per capita per day (gpcd) during a 7-14 day period of dry weather flow and high groundwater.
- If average wet weather flow is less than 275 gpcd, inflow is non-excessive. The definition of "excessive inflow" per US EPA Publication 97-03 is flow exceeding 275 gpcd during wet weather flow periods.

Similar to the 2012 GSP, an analysis of daily flows from both cities was performed to establish the potential for I/I contributions through a preliminary and conservative evaluation. Flow measurements for the Garfield Pump Station located in the City of Nooksack plus contributions from the area in Nooksack not served by a pump station (Mini-Basin E as shown on Figure 5-1) were used to determine the flow contribution for Nooksack. The results of the analysis are summarized in Table 4-7.

### Table 4-7
### Average Per Capita Flows in Everson and Nooksack

| Flow | Both Cities Contribution (gpcd) | Total Flow (mgd) |
|---|---|---|
| Dry Weather | 50.5 | 0.229 |
| Average Annual | 66.0 | 0.300 |
| Wet Weather – Infiltration | 91.8 | 0.417 |
| Wet Weather –Inflow | 229.4 | 1.042 |

The flow conditions in Table 4-7 presented are based on the following approach for the flow data from 2021 through 2023.

- The dry weather flows are based on summer flows from late June through late September when flows are typically lowest.
- Average annual flows is calculated from the Garfield pump station flow meter plus mini-basin E flows based on average applied to the number of connections and school based on the Department of Ecologies guidelines in the Criteria for Sewage Works Design.
- The wet weather - inflow flows applies the single peak day flow for the months when ground water is typically highest which is during spring, late march to late June. This evaluation did not evaluate for dry periods per the US EPA Publication No. 97-03 above meaning it likely captures a rain event(s) and therefore is conservative.
- The wet weather - infiltration flows use of the peak day flow as the wet weather flow. is conservative and is larger than average wet weather flows. This evaluation did not evaluate a high precipitation periods and average flows per the US EPA Publication No. 97-03 above and therefore is conservative.

The per capita results indicate that Nooksack and Everson appear to not exceed the EPA thresholds for excessive infiltration or inflow. Again, this evaluation omits the Nooksack River flood events in February 2020 and November 2021 which produced the highest flows; however, that value(s) is unknown as flow monitoring equipment was compromised. Additional justification behind this is that the EPA Publication No. 97-03 referenced above as well as the EPA *Guide for Estimating Infiltration and Inflow* dated June 2014 is is not applicable to the flows experienced by the City. The floods differ as they produce a delayed rate increase after the peak rain event which is a combination of rainfall and low land snow melt entering the system. These flows can also enter through “normal” means, e.g. submerged toiled in a flooded home or business. Flows then return to typical rates after a day or less. Due to this divide in flow characteristics, the matter appears to be a flood resiliency subject rather than an I/I which the City, County, FEMA, and other stakeholders are continuing to evaluate. The City will also continue to consider resiliency specific to the WWTP and collection system through future studies and improvements.

## 4.4 WWTP Unit Flows

Flows are projected for future dates based on 'units' such as people or acres using unit flows derived for those parameters from historical records. Existing domestic sewage flow was derived from the 2021 through 2023 period of record at the WWTP. The domestic sewage flow per capita is not anticipated to increase significantly over the planning period; therefore, the current value of 66 gpcd is used for future projections. The 66 gpcd includes contributions from both Everson and Nooksack.

The use of 66 gpcd in the future assumes that the general mix of sources will remain essentially the same as currently exists within the sewerage systems. It is anticipated that some existing conveyance facilities will be rehabilitated during the study period, which will incidentally reduce infiltration rates. New sewer facilities will be constructed to modern standards which include materials that are more resistant to infiltration and inflow than were used in past decades. Therefore, the 66 gpcd may reduce over the study period, but it not quantifiable with existing flow data.

## 4.5 Peaking Factors

A peaking factor method is commonly used to project peak wastewater flows. Peak design flows and pollutant loadings are the key parameters for evaluating wastewater facilities, as well as designing upgrades and improvements.

### 4.5.1 Peaking Factor for Domestic Wastewater

The maximum month and maximum day peaking factors derived from the 2020 through 2023 period of record at the WWTP are shown in Table 4-5, and as discussed in Section 4.1.3. The peak hour peaking factor is a weighted average by population per the respective cities that is derived from Figure C1-1, Ratio of Peak Hourly Flow to Design Average, *Criteria for Sewage Works Design, WSDOE, 2008*. Table 4-8 shows existing peaking factors in relation to average day flow projected for future years.

**Table 4-8**
**WWTP Peaking Factors for Domestic Wastewater**

| Year | Population | Ratio of Peak Hour Flow to Annual Average Day Flow[2] | Ratio of Average Day of Max Month to Annual Average Flow | Ratio of Peak Day Flow to Annual Average Day Flow |
|---|---|---|---|---|
| '20-'23 | 4,543[1] | 3.52 | 1.48 | 3.31 |
| 2031 | 5,618 | 3.45 | 1.48 | 3.31 |
| 2045 | 7,147 | 3.36 | 1.48 | 3.31 |

Notes:
1) Average population of the City and City of Nooksack combined from 2020 to 2023.
2) Weighted average of ratio of peak hourly flow to design average respective to each City's Population and year.

The maximum month and peak day factors are related to the served population and historically these peak factors decline as the population increases as shown in Table 4-8. Keeping the factors the same over the future forecasts is a conservative approach in estimating these peaking factors.

## 4.6 Projected Flow

The total projected wastewater flow for the year 2045 will include domestic flows, industrial flows, and infiltration and inflow. Details of the projected wastewater flows are summarized in the following paragraphs. These projected flows are aggregated for the entire collection system and are most relevant for evaluation of the WWTP facilities. Projected flows for the mini-basins comprising the Everson sewer service area are developed in Chapter 5.

### 4.6.1 Annual Average Flow

Domestic flows are calculated as the product of the unit flows developed in Section 4.4 and the projected population. Industrial flows are not anticipated to change significantly by the year 2045. If a new, significant industrial source (>5% of average annual WWTP flow) is connected to the sewer system, the flow and waste loading analysis should be reviewed and modified, if necessary. The projected average annual wastewater flows to the Everson WWTP throughout the planning horizon are tabulated in Table 4-9.

### 4.6.2 Average Day of the Maximum Month Flow

The projected average day of the maximum month flow, as determined from the unit flows and peaking factors derived above, are presented in Table 4-9.

### 4.6.3 Peak Hour Flow

The peak hour flow would occur when a design storm happens at the same time as the diurnal flow peaks. The projected peak hour flow, as determined from the unit flows and peaking factors, are presented in Table 4-9. It is highly unlikely that the peak hour flows for all sources would occur simultaneously and the peak hour flows presented in Table 4-9 are considered to be conservatively high estimates.

**Table 4-9**
**Projected Wastewater Flows**

| Flow (mgd) | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Average Annual | 0.300 | 0.372 | 0.473 |
| Average Day of the Max Month | 0.445 | 0.552 | 0.703 |
| Peak Day Flow | 0.811 | 1.006 | 1.279 |
| Peak Hour Flow | 1.056 | 1.281 | 1.589 |

The projected portion of flow attributable to I/I is based on the calculated I/I for the current sewer systems in Everson and Nooksack. As the sewer system is repaired and upgraded, this number may decrease. Conversely, this number may also increase as infrastructure ages and prior to repairs.

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# Chapter 5 Wastewater Conveyance Analysis

<This Chapter includes updates and amendments for Chapter 5 "Wastewater Conveyance Analysis" in the *2012 General Sewer Plan* (2012 GSP)>

## 5.1 Study Area & Mini-Basin Delineation

<The following replaces the Section 5.1.1 "Sewer Drainage Mini-Basins">

### 5.1.1 Sewer Drainage Mini-Basins

A mini-basin was generally defined as an area which drains to a specified discharge point. Each portion of the system contributing to a pump station was delineated as a separate mini-basin for this analysis, as well as the mini-basin that flows by gravity to the WWTP. The East Main Street (E Main St) Collector conveys all the sewer flow from the City of Nooksack and a portion of the City's to the WWTP via the Interceptor Force Main.

Mini-basins were delineated for both the current conditions and projected future conditions. Future conditions were evaluated for the years 2031 and 2045 (see Modeling Scenarios, Section 5.3.2). Mini-basins for future conditions are shown in Figure 5-1.

<The following replaces the Section 5.1.2 "Sewer Flows by Mini-Basin">

### 5.1.2 Sewage Flows by Mini-Basin

Projected sewer flow rates are based on existing measured flow rates, population data from the 2020 Census, population projections from the 2026 Whatcom County Comprehensive Plan, and peaking factors from the Washington State Department of Ecology "Criteria for Sewer Works Design" (Orange Book). Due to the predominately residential nature of the City, all flow is assumed to be residential or from schools. The small amount of flow from commercial and industrial sources is included in the residential flows and assumes projections will maintain relatively the same proportion.

Dwellings were based on the number of residential sewered customers provided by the City and compared to the State of Washington, Office of Financial Management 2023 City Estimate Worksheet.

Average annual per capita sewage flow was estimated to be 63.7 gpcd in the City of Everson, and 10 GPD per student and staff at the elementary school based on Department of Ecology recommendations.

The per capita sewage flow was multiplied by the population to obtain the annual average flow for each mini-basin. This was performed for each scenario. The total annual average flow was multiplied by a peak hour factor to determine the peak hour flow.

## 5.3 Model Construction

<The following replaces Section 0 "Modeling Description" first paragraph>

### 5.3.1 Modeling Description

A spreadsheet model was developed to analyze the conveyance system. The model utilizes Manning's equation to determine the capacity of the gravity sewer mains. The design capacity of the gravity mains

was considered to be 80 percent depth, which is equivalent to 87 percent of the hydraulic capacity. The pump station capacities were obtained from the City and compared against the modeled peak hour flows at each pump station. Projected sewer flow rates are based on existing measured flow rates, population data from the 2020 Census, population projections from the 2026 Whatcom County Comprehensive Plan, and peaking factors from the Washington State Department of Ecology "Criteria for Sewer Works Design".

<The following replaces Section 5.3.2 "Modeling Scenarios" >

### 5.3.2 Modeling Scenarios

Four scenarios were developed to analyze the Everson wastewater conveyance system as described below:

- Existing Scenario – The existing facilities were calibrated against current flow data.
- 2031 Scenario – Projected population of 3,624, distributed within the current City limits.
- 2045 Scenario – Projected population of 4,579, expands into UGAs.

As it is unknown exactly how undeveloped parcels within the UGA will develop, assumptions about where sewer facilities for future mini-basins would connect to existing facilities were made based on topography and City input. These assumed connection points or nodes were then used as mini-basin input nodes for the future facilities. In some cases the assumed connection points were likely locations for connection of gravity sewers, and in other cases pump stations and force mains would be required.

The average per capita sewer flow rate of 63.7 gallons per capita per day was used to determine total average annual flows within the city. Everson peak hour flow peaking factors of 3.52 from the Orange Book were used to calculate peak hour flow for the existing scenario. The projected future wastewater flows for the City (the flow numbers do not include the contribution from the City of Nooksack) are summarized in Table 5-1. The model details are provided in Appendix D.

**Table 5-1**
**Projected City of Everson Wastewater Flows**

| Flow (mgd) | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Average Annual | 0.202 | 0.231 | 0.292 |
| Peak Hour Flow | 0.696 | 0.779 | 0.957 |

<The following replaces Section 5.4 "Hydraulic Modeling Analysis" >

## 5.4 Hydraulic Modeling Analysis

In general, the conclusions herein are considered reasonable, it must be noted that these results are based on data that is in some cases incomplete or unverified. Please note that pump stations were not modeled to verify capacity, and the capacities used were based on data from the City. The model simulation results of existing conditions generally agree with the reported system performance. Minor changes in pipe inverts would have minimal impact on the overall results.

The modeling and analysis conducted herein for future expansions was based on Section 2.6 where due to various unknowns associated with the developments, e.g. financial, permitting, mitigation, schedule, etc.; the assumption utilized for projecting growth within the City limits is based on the following:

- 6-year planning period:
  - Developments recently approved, currently in permitting, or that are in the pre-application process.
  - For simplicity, the assumption applied to the final plats and preliminary plats is that 50% of each known development's parcels will be developed in the planning period.
- 20-year planning period assumes the developments in the 6-year planning are built out 90 percent.

There is potential that additional development may occur in the city limits, but the anticipation is this will be limited and dispersed. Most of these properties are smaller, partially or entirely in the floodplain, and would support a minor increase in dwellings. The Nooksack River special flood hazards areas are also projected to expand based on the recent September 2025 revised draft FEMA flood maps. Additionally, the current property owners have elected to not develop or subdivide during the recent increased housing demand; this course of action is anticipated to continue. Based on these considerations, it is assumed the known developments best represent foreseeable future development.

As noted in Section 2.6.2, given the assumptions above, the City will need to expand into the urban growth areas (UGA) within the planning period. Preliminary number suggests approximately 77 dwellings or 218 people. The City assumes that most growth of this growth will be concentrated in the east and south/southwest UGAs based on properties being out of the flood hazard areas and current property owner development interest. Modeling concentrated growth in these areas which is also indicated in Figure 5-1.

### 5.4.1 Existing Gravity System Performance Results

One significant deficiencies was found in the model results for the existing facilities under the current conditions. The area of concern is the E Main St Collector. All other gravity conveyance pipes appeared to have adequate "design" capacity to handle current conditions, including infiltration and storm inflow. Additionally, the modeling suggests that mini-basin 6 gravity piping is nearly at "design" capacity today.

#### East Main Street Collector

The City of Nooksack's flows enters the City of Everson via the E Main St Collector that flows to PS 4 downstream. Modeling suggests that the "hydraulic" capacity of the E Main St Collector has already been exceeded during peak hour flow events. There have been no reports of wastewater surcharging in dwellings or overflowing manholes to BHC's knowledge. However, it is likely that flows have surcharged within the manholes during peak events. Again, recent major flood events are not included in this evaluation. If feasible, an inspection of the manhole's during a peak flow event to see if surcharging is visible channel could offer more reliability. The City might also consider inspecting the manholes after for watermarks or check for debris on the benches and ladders.

There are some options the City should evaluate to mitigate capacity concerns along the E Main St Collector in the future which include but are not limited to:

- Install new Garfield pump station force main to the Interceptor pump station.
- Relocate the Interceptor pump station east within the City of Nooksack.

- Increase E Main St Collector pipe diameter from 8-inch to 10-inch.

Installing the new Garfield pump station force main to the Interceptor pump station was selected in the 2016 GSP for capital improvements planning. Based on recent discussion and coordination with the City and City of Nooksack, the preference now is to relocate the Interceptor pump station east, therefore this option will be incorporated into the capital improvements projects for planning purposes.

It is recommended the City prepare a preliminary design with an alternatives analysis to identify all City goals as well as all; permitting and regulations, and all considerations – future and present – to ensure adequate planning and a successful project.

### 5.4.2 Projected Gravity Mains Collection System Performance

#### 2031 Scenario – Gravity Mains System Results

One gravity main capacity deficiency was found in the modeling results for the existing facilities under the 2031 conditions. The area of concern is the mini-basin 6 gravity main that flows to the Pump Station 6 at the bridge. All other gravity conveyance pipes appeared to have adequate capacity to handle projected conditions, including infiltration and storm inflow.

##### Mini Basin-6 Gravity Piping

Based on the projections, the mini-basin 6 gravity main that discharges to Pump Station 6 is anticipated to reach "design" capacity in 2025 and "hydraulic" capacity in 2029. The mini-basin is the most expansive, so a rough refinement suggests that the deficiency is likely limited to the 2,300 lineal feet trunk along Everson Rd from Pump Station 6 to Strandell Street but this should be confirmed during detailed design. This existing 8-inch sewer main would need to be replaced with a minimum 10-inch diameter gravity line.

A preliminary evaluation was prepared to investigate extending the Pump Station 10 force main north to relieve sewer main capacity concerns within the planning period. There is a hydraulic benefit initially but based on the projections and planned developments the gravity main would still reach "hydraulic" capacity by 2032.

#### 2045 Scenario – Gravity Mains System Results

No additional gravity system capacity deficiencies were found in the model results for the existing facilities under the 2045 conditions. All gravity conveyance pipes appeared to have adequate capacity to handle projected conditions, including infiltration and storm inflow.

#### Asbestos Cement Pipe Consideration

One consideration for all gravity piping identified for replacement above is that the existing pipe material is asbestos cement (AC) per as-built information received from the City. The Environmental Protection Agency (EPA) identified AC pipe as friable years ago and so handling is regulated under the asbestos National Emission Standard for Air Pollutants (NESHAP). At this point in time there are two approved EPA AC pipe replacement methods; 1) open trench which requires wet-cutting, containment wrapping, and disposal and 2) close tolerance pipe slurrification (CTPS). CTPS is a trenchless method that simultaneously grinds the AC pipe with a cementitious slurry that is removed by a vacuum truck while new pipe is pulled in for replacement. Pipe bursting used to be a widely used option but more recently this method was identified as unacceptable by the EPA.

This is being brought to the City's attention as AC pipe replacement incurs additional costs in comparison to replacing other types of piping. Also, specific to the mini-basin 6 main, there is a State Route 544 crossing which WSDOT requires trenchless installations for. There is a potential to be granted a WSDOT variance for open cutting, but this can be a long process, and there is no guarantee that the variance will be permitted. Another option would be traditional trenchless in a new alignment for a WSDOT crossing and abandoning the existing.

### 5.4.3 Project Pump Station Collection System Performance

#### 2031 Scenario – Pump Station Results

Following the model run for existing conditions and calibrating to existing measured flows as reasonably as possible with the available flow data, the model was run for the 2031 projected peak hour flow scenario. The results for the pump stations are summarized in Table 5-3.

**Table 5-3**
**Evaluation of Sewage Pump Station Capacities Required in 2031**

| Pump Station | Existing Capacity (gpm) | Peak Hour Flow (gpm) | Capacity Concern |
|---|---|---|---|
| 4(1) | 500 | 383 | No |
| 5 | 225 | 92 | No |
| 6 | 720 | 344 | No |
| 7 | 325 | 164 | No |
| 8 | 60 | 55 | No |
| 9 | 60 | 13 | No |
| 10 | 350 | 63 | No |
| 11 | 60 | 35 | No |
| 13 | 100 | 51 | No |
| SW Dev(2) | - | 13 | - |
| WWTP IPS | 1100 | 875 | No |
| WWTP EPS | 1050 | 875 | No |

Notes:
1) With respect to potential relocation, implemented or not, it does not impact flow projections.
2) New pump station anticipated in recently annexed southwest region of City in the Quarter Horse development by approximately 2030 per the City.

No significant deficiencies were found in the model results in Table 5-3. All force mains and pump stations appeared to have adequate capacity to handle current conditions, including infiltration and storm inflow.

#### 2045 Scenario – Results

The model was run for the peak hour inflows for the 2045 scenario. The results for the pump stations are shown in Table **5-4** below.

**Table 5-4**
**Evaluation of Sewage Pump Station Capacities Required in 2045**

| Pump Station | Existing Capacity (gpm) | Peak Hour Flow (gpm) | Capacity Concern |
|---|---|---|---|
| 4 – Interceptor(1) | 500 | 494 | No |
| 5 – Jim & Dave's | 225 | 92 | No |
| 6 – Bridge | 720 | 514 | No |
| 7 – Lincoln | 325 | 176 | No |
| **8 – Reed's** | **60** | **67** | **Yes** |
| 9 – Evergreen | 60 | 13 | No |
| 10 – Robinson | 350 | 80 | No |
| **11 – Maple Ridge** | **60** | **60** | **Yes** |
| **13 – Hawks Landing** | **100** | **128** | **Yes** |
| SW Dev(1) | - | 55 | - |
| WWTP IPS | 1,100 | 1,104 | No |
| WWTP EPS | 1,050 | 1,104 | **Yes** |

Notes:
1) With respect to potential relocation, implemented or not, it does not impact flow projections.
2) New pump station anticipated in recently annexed southwest region of City in the Quarter Horse development by approximately 2030 per the City.

Review of the 2045 modeling analysis results found that Pump Station 8 is projected to be under capacity for peak hour flows as well as Pump Station 11. Additional pump stations and related force mains will be required to serve areas that will be developed in the UGAs.

### Pump Station 8

Review of the modeling analysis results found that Pump Station 8 would reach approximately 66 gpm by 2045 and would exceed capacity in approximately 2036 based on existing flow characteristics, development, and projections. Department of Ecology recommends that the design flow be sized for a minimum 20 years of service from installation. A pump capacity of 100 gpm seems reasonable, but the City should analyze and evaluate flow capacity based on when construction is planned to facilitate 20 years of service as well as other considerations like wet well volume and condition. General regular condition assessments and/or mechanical equipment design life may also warrant replacing the pumps with higher capacities sooner.

### Pump Station 11

Review of the modeling analysis results found that Pump Station 11would reach approximately 60 gpm by 2045 and reach capacity based on existing flow characteristics, development, and projections. Department of Ecology recommends that the design flow be sized for a minimum 20 years of service from installation. A pump capacity of 100 gpm seems reasonable, but the City should analyze and evaluate flow capacity based on when construction is planned to facilitate 20 years of service as well as other considerations like wet well volume and condition. General regular condition assessments and/or mechanical equipment design life may also warrant replacing the pumps with higher capacities sooner.

### Pump Station 13

Review of the modeling analysis results found that Pump Station 13 would reach approximately 123 gpm by 2045 and would exceed capacity in approximately 2039 based on existing flow characteristics, development, and projections. Note, this assumes UGA development is limited to the south side of the City and all flows go to pump station 13; therefore this is considered conservative. Department of Ecology recommends that the design flow be sized for a minimum 20 years of service from installation. A pump capacity of 200 gpm seems reasonable, but the City should analyze and evaluate flow capacity based on when construction is planned.

### WWTP Influent/Effluent Pump Stations

Review of the modeling analysis results found that WWTP's influent and effluent pump stations would reach approximately 1,104 gpm in the planning period. The flow would exceed the pump station capacities in 2045 and 2042, respectively. This is based on existing flow characteristics, development, and projections. Capacity should be evaluated during the proposed WWTP study, see Chapter 8 for EPS planning.

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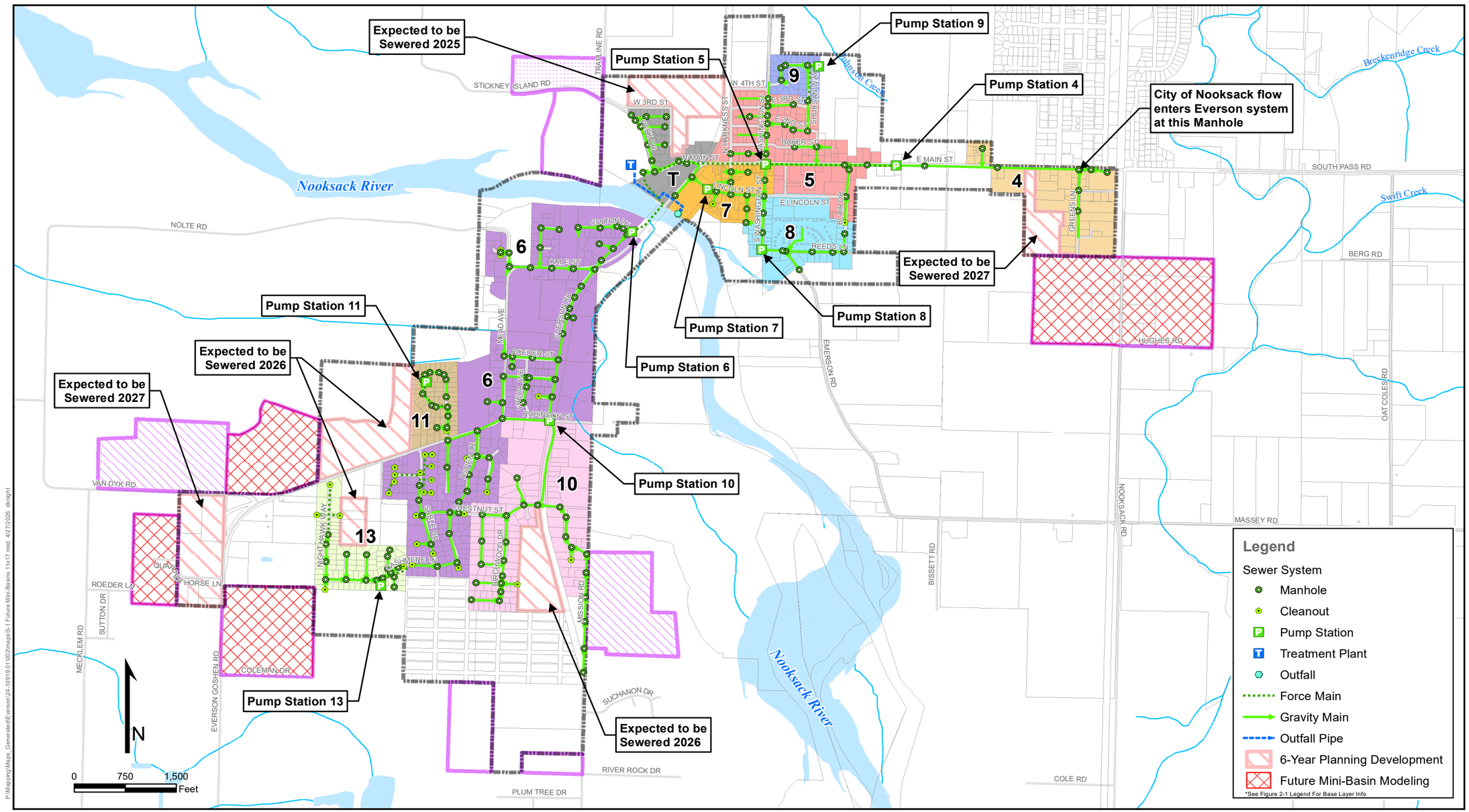




GIS Data: City of Everson & Whatcom County.
Data sources supplied may not reflect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

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city of everson

## Future Mini-Basins

General Sewer Plan
City of Everson, Washington
April 2026

Figure 5-1

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# Chapter 6 Collection Facilities Improvements

<This Chapter includes updates and amendments for Chapter 6 "Collection Facilities Improvements" in the *2012 General Sewer Plan* >

<The following replaces introduction and Section 6.1 "Existing System Improvements">

As described in Chapter 5, the conveyance system was evaluated for the existing sewer system and the sewer system for projected flows in 2031 and 2045 to determine system deficiencies. Recommended improvements are illustrated on Figure 6-1.

Previous CIP collection system projects performed since the 2012 General Sewer Plan include:

- PS 4 Panel relocation
- PS 4 Mechanical replacement/upgrade
- PS 8 Upgrade wet well access with hatch
- PS 10 & 11 Upgrade telemetry
- PS 5, 6, 7, 8, 9, 10, & 11 New emergency generators.

## 6.1 Existing System Capital Improvements

The recommended projects herein are selected based on facilitating the City's ability to service the community through the planning period; most improvements relate to capacity and obsolescence. For capacity driven projects, two pump stations and two areas of gravity sewer main were identified as having inadequate capacity for the projected 2045 wastewater flows. Obsolescence, improvements classified as obsolete equipment, are based on the age of the infrastructure. Pump station mechanical and electrical equipment is expected to have a typical usable life of 25 to 30 years.

The facilities improvements identified as required are described below. Note, the capital improvements for the treatment plant, including the influent and effluent pump stations, are discussed in Chapter 8.

### 6.1.1 Recommended Pump Station Collection System Projects

#### Pump Station Flow Meters

Included in the 2012 GSP was installation of several flow meters on pump stations as the majority of the City's pump stations do not have them. There are benefits to be realized with flow monitoring when utilized as a tool to aide in flow studies, identifying and tracking localized I/I contributions, and identifying other potential concerns in the City's system. It is recommended that the City implement a program for pump station meter installations to facilitate increased operational and maintenance efficacy through retrieving system wide flow data. The program could be biennial or annual installation of a flow meter for the planning period, that can be implemented at any time but for planning purposes it is assumed this would occur after the more critical 6-year capital improvements that ensure continued system functionality and growth. Currently pump stations 4, 5, 6, 7, 8, 9, 10, 11, and 13 are not metered.

6-Year Capital Improvements

- None Identified.

Long-Term Potential Capital Improvements

- Implement biennial flow meter installation program.

Note, clamp on, microwave, ultrasonic, open-channel, and other style of flow meters may be better suited but this evaluation assumes a magnetic flow meter in a new utility vault on the force main. Note, all pump stations but Garfield are suggested to install a flow meter so this evaluation assumes the City would implement an annual flow meter installation program until all pump stations are metered. Additionally, it is recommended that flow meters be added to the City development standards for future pump station installations.

### Pump Station 4

See *East Main Street Collector, Pump Station 4, and Pump Station 1* in Section 6.1.2.

### Pump Station 5 Improvements

In the 2012 GSP, the mechanical equipment was identified to reach the end if its design life by 2012 and would need to be replaced due to obsolescence. It does not appear that this work has been implemented and that this should still be included in the City's capital improvement planning. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

6-Year Capital Improvements

- Mechanical equipment replacement near term.

Long-Term Potential Capital Improvements

- Install a flow meter.

Not included in the capital improvements plan but discussed with the City while developing this document and included in the 2012 GSP, the City has expressed a desire to relocate Pump Station 5 out of Main St. No action at this time has been identified but the City should re-evaluate this in the future.

### Pump Station 6 Improvements

In the 2012 GSP, the mechanical equipment was identified to reach the end if its design life by 2031 and would need to be replaced due to obsolescence. This capital improvement is still recommended and included for planning herein. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

6-Year Capital Improvements

- Mechanical equipment replacement in 2031.

Long-Term Potential Capital Improvements

- Install a flow meter.

Not included in the capital improvements plan but discussed with the City while developing this document, the City has expressed a desire to relocate Pump Station 6 further from SR-544 bridge. The reason is due to flooding proximity concerns and planned future bridge work. No action at this time has been identified but the City should re-evaluate this in the future, particularly when the SR-544 bridge work is more defined.

### Pump Station 7 Improvements

In the 2012 GSP, the mechanical equipment was identified to reach the end if its design life by 2013 and would need to be replaced due to obsolescence. It does not appear that this work has been implemented and that this should still be included in the City's capital improvement planning. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

#### 6-Year Capital Improvements

- Mechanical equipment replacement near term.

#### Long-Term Potential Capital Improvements

- Install a flow meter.

### Pump Station 8 Improvements

The pumps will reach design capacity in 2037 and have a projected service area flowrate of 67 gpm in 2045. However, based on City records the pump station mechanical is all original equipment, therefore it is recommended to replace the mechanical equipment. The pumps could be upsized during mechanical replacement; however, not evaluated herein, but depending on pump selection the existing generator or other electrical gear may require upgrading too. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

#### 6-Year Capital Improvements

- Replace mechanical and upgrade pumps to increase capacity near term.

#### Long-Term Potential Capital Improvements

- Upsize pumps in 2037 if not during 2026 mechanical replacement. For planning purposes the pumps are assumed to be upsized during the 6-year planning.
- Install a flow meter.

### Pump Station 9 Improvements

2012 GSP improvements have all been addressed and capacity is sufficient for the planning period. The pumps were also replaced in 2024. Additionally, it is assumed the concrete wet well and mechanical equipment is in sufficient condition through the end of the planning period but this should be inspected annually.

#### 6-Year Capital Improvements

- None identified.

Long-Term Potential Capital Improvements

- Install a flow meter.

### Pump Station 10 Improvements

The 2012 GSP noted mechanical replacement, excluding the pumps, in 2015 due to obsolescence. It does not appear the mechanical equipment has been replaced and therefore is included in the capital improvements planning. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

6-Year Capital Improvements

- Mechanical equipment, excluding pumps, near term.

Long-Term Potential Capital Improvements

- Install a flow meter.

### Pump Station 11 Improvements

The pumps will reach design capacity in 2045 with a projected service area flowrate of 60 gpm. The 2012 GSP had not identified capacity deficiency but it had identified mechanical replacement in 2036 due to obsolescence. Based on this it is recommended the pumps be replaced with higher capacity pump when the mechanical equipment reaches its design life in 2036. Not evaluated herein, but depending on pump selection the generator or other electrical gear may require upgrading too. Additionally, it is assumed the concrete wet well is in sufficient condition through the end of the planning period but this should be inspected annually.

6-Year Capital Improvements

- None identified.

Long-Term Potential Capital Improvements

- Replace mechanical and upgrade pumps to increase capacity in 2036.
- Install a flow meter.

### Pump Station 13 Improvements

This pump station was recently installed in 2021 and a capacity limitation of 2039 was identified assuming UGA development is concentrated in the south side of the City. Within the planning period, the mechanical and electrical equipment should not be approaching obsolescence and assumes the generator can accommodate the new larger pumps but this should be confirmed once pumps are selected. It is also still recommended that the wet well interior be inspected annually.

6-Year Capital Improvements

- None identified.

Long-Term Potential Capital Improvements

- Upgrade pumps to increase capacity in 2039.

- Install a flow meter.

### 6.1.2 Recommended Gravity Collection System Projects

#### East Main Street Collector, Pump Station 4, and Pump Station 1

Per Chapter 5, the East Main Street (E Main St) Collector is likely at hydraulic capacity during peak flow events. Previously in the 2012 GSP, extension of Nooksack's Garfield pump station force main was identified and selected as a means to relieve service demand on the E Main St Collector. This initial selected approach has many repercussions on the Garfield pump station which is also approaching capacity. Additionally, during plan preparation discussions, the City of Everson has expressed a desire to relocate Pump Station 4. In general, any significant improvement, alteration, and/or modification to one of these elements has impacts on others.

The following lists relative considerations, concerns, and issues for the respective collection system elements mentioned herein:

- The East Main Street Collector
  - The gravity main has reached peak design flow hydraulic capacity.
  - The existing gravity main constructed around 1972, is 8-inch AC pipe.
  - 2016 GSP identified installing a new Garfield pump station 6-inch force main to the Interceptor pump station to relieve constriction in the gravity main.
  - Existing alignment is in the floodway and near wetlands, crosses Johnson Creek.
  - Existing alignment is in the WSDOT right-of-way.
- Pump Station 4 - Interceptor
  - Located in the FEMA floodway and near wetlands.
  - Located in the WSDOT right-of-way.
  - Wet well constructed around 1972.
  - Generator is in need of replacement.
- Pump Station 1 - Garfield
  - Discussed further in the City of Nooksack GSP, any significant modification to the pump station (i.e. increase pump rates, extend force main, etc.) likely incurs replacement of the pump station.
  - Projections suggest pumps will reach their design capacity in 2028.

It is recommended design commence as soon as feasibly possible with a preliminary alternatives analysis evaluation of the pump stations, force mains, and E Main St Collector as a whole. This is due to the scale of the elements and their system impacts. Site reconnaissance - cultural, biological, survey, and geotechnical – should follow once a plan to move forward for design is identified. Depending on the selected improvements, there is a large sewer project that likely needs to be constructed soon. Given regulatory review of the critical areas and WSDOT permitting, the earliest feasible timeline for construction commencing is likely spring of 2027. However, depending on capital constraints, regulatory review, and/or funding applications (particularly federal sources); any of these can further delay construction which puts the City at more risk of overwhelming the existing system.

For the purposes of planning it is assumed that Pump Station 4 would be relocated east to a location that is not in the 100-year flood plain and facilitates intercepting flow from the City of Nooksack prior to entering the E Main St collector to relieve hydraulic demand upstream. To realize these benefits, in addition to a new pump station the project would include extending the force main to the existing force main, demolishing the current Pump Station 4, and installation of new gravity mains in the City of Nooksack and along the E. Main Street collector. Design is assumed to commence in 2026 and construction starting in the second half of 2027.

6-Year Capital Improvements

- Design Pump Station 4 Relocation project in 2026.
- Construct Pump Station 4 Relocation project in 2027.

Long-Term Potential Capital Improvements

- None Identified.

### Mini-Basin 6 Sewer Improvements

The most downstream approximately 2,300 lineal feet portion of Mini-Basin 6 existing 8-inch gravity main is projected to reach capacity in 2028, the extent should be confirmed during design. This section will need to be replaced with a minimum 10-inch gravity main. For planning purposes, a worst case is assumed that replacement would be open trench cut in the existing alignment. This alignment incurs additional costs related to temporary bypassing and AC pipe demolition and disposal; it is assumed that the manholes are in satisfactory condition but that should be confirmed during design. Potentially the new alignment could be shifted and the existing mains abandoned in place but this would require new manholes which could offset savings. An alternatives analysis should be included during preliminary design.

6-Year Capital Improvements

- Design mini basin 6 sewer replacement in 2027.
- Construct mini basin 6 sewer replacement in 2028.

Long-Term Potential Capital Improvements

- None Identified.

### Flow Monitoring Study

It is recommended that a flow monitoring study of the City of Everson and City of Nooksack sewer systems be performed as a single study to determine actual sewer flows in each City. The study will assist in further quantifying the flow contributions from each City to the Everson Wastewater Treatment Plant.

## 6.1.3 Additional Capital Planning Improvement Considerations

Several additional programs are recommended for review, but are not included in the capital improvement program at this time, to maintain the capacity of the existing sewer collection system. These are described below:

- Pump stations 5, and 6 would ideally be relocated as discussed above. For capital improvement planning purposes the opinion of probably project costs would be $1.75 million to $2.25 million depends on several factor including but not limited to depth, bypassing, pump sizes, electrical gear,

mitigation, distance of relocation and respective gravity main lineal footage.

- Some of the existing pipes are old or were installed with pipe material now considered obsolete. A regular program of pipe replacement would gradually bring these segments up to modern standards.
- Additionally, the City has expressed an interest in relocation of three pump stations that are either in the floodplain or have the potential to be impacted by likely adjacent projects specific to flood control; however, these projects are not required. Regarding obsolescence, the City should plan on replacing mechanical systems approximately every 20 years.
- Infiltration and inflow is not believed to be a significant issue for the sewer system as a whole as discussed in previous sections. Local I/I problem areas may exist however, and so it is recommended that an I/I reduction program be instituted. Better flow monitoring at individual pump station will facilitate this analysis.
- Television inspection of a portion the sewer system each year would allow maintenance concerns to be identified and direct maintenance funds to the most cost-effective locations.
- Fats, oils, and grease (FOG) accumulations are a concern with most sewer systems in that these deposits may plug pipes and cause sewer overflows. An active study to the effectiveness of the current City FOG program and development of improved practices will contribute to better operating efficiencies. The City is currently developing a FOG program.
- Asset management will be enhanced when the above programs are in place; at which time an updated asset management program will aid the City to make the best use of available sewer utility funds.

<The following replaces Section 6.2 “Proposed Mini-Basins Expansion” >

## 6.2 Future Mini-Basins Expansion

The City is projected to experience growth beyond the current city boundaries. Figure 6-1 shows future sewer service that includes the current City limits and extending service to the UGAs. Expansion of sewer service to these areas is discussed below. However, detailed surveys are not available so the actual facilities required, and their locations may change with better data as the assumptions herein are based on Whatcom County LIDAR. The following UGAs currently have no sewer service.

- East UGA – It is assumed that the East UGA will be developed with single family homes. Due to the topography, an 80 GPM pump station with a 4-inch, 1,400-foot-long force main discharging to Mini-Basin 4 will be required to convey sewage to the existing sewer system.
- North UGA – It is assumed that the North UGA will be developed with single family homes. Due to the topography and planned developments in the City limits, this area appears to be able to be served by gravity mains.
- West Side, Northwest (W-NW) UGA– It is assumed that the W-NW UGA will be developed with single family homes. Due to the topography and planned developments in the City limits, this area appears to be able to be served by gravity mains.
- West Side, West (W-W) UGA–It is assumed that the W-W UGA will be developed with single family homes. Due to the topography and the planned Quarter Horse development pump station, this area appears to be able to be served by gravity mains.

- West Side, Southwest (W-SW) UGA – It is assumed that the W-SW UGA will be developed with single family homes. Due to the topography and a gravity main stub's depth of approximately 10 feet below grade at the south end of Night Hawk Way, the area appears to be able to be served by gravity mains.
- West Side, South (W-S) UGA – It is assumed that the W-S UGA will be developed with light industrial. Due to the topography, an 80 GPM pump station with a 4-inch, 1,500-foot-long force main discharging to Mini-Basin 4 will be required to convey sewage to the existing sewer system.
- UGA Reserve and Proposed UGA Reserves – Development in these areas appears to be able to be served by gravity mains.

Actual alignment of the sewers for these developments will depend on the platted layout of the streets and the subdivision of the developed properties. These layouts will be prepared by engineers for the property owners at the time of development. Specific sewer alignments will then be prepared with actual pipe profiles designed in relation to the site grading plans. Accordingly, only general sewer service concepts have been prepared for this GSP in anticipation of some changes in topography and parcels when development occurs. However, trunk mains need to be constructed during development to serve these areas.

<The following replaces Section 6.3 "Preliminary Cost Estimate" >

## 6.4 Opinions of Probable Costs

Improvement projects are listed in Table 6-1 with the major components conceptually described. These components are identified only to a preliminary level of design with approximate dimensions which will need to be refined during final design.

Opinions of probable construction costs (OPCC) were estimated from bid results for similar projects in the Puget Sound area and RS Means cost data for 2025. In addition to the costs to build the various components, the estimated construction cost also includes sales tax. The opinions of probable construction cost presented herein are Class 4 opinions as defined by the American Association of Cost Engineers, meaning they are representative of a design that is 1 to 15 percent complete and have an expected accuracy of -20 to +30 percent. The capital costs include a 10 percent markup for mobilization; a 15 percent markup for contractor overhead and profit, bonds and insurance; a 8.8 percent markup for sales tax; and a 25 percent contingency. It is expected that the application of a 25 percent contingency pushes the capital cost opinions toward the higher end of the range of accuracy.

Opinion of probable project costs (OPPC) include the estimated construction costs plus 20 to 25 percent engineering services (design, bidding, contract award, and services during construction), 2 percent for administration, and an owner's 5 percent contingency.

Pump Station No. 4 Relocation costs includes 4 percent for site reconnaissance (survey, geotechnical, biological, cultural) and 2 percent for inspection and permitting. No costs are included for financing, funding applications, easements, right-of-way, or property acquisition.

## Table 6-1
## Opinion of Probable Costs Collection System Improvements

| Capital Improvement | Capacity | Obsolescence | O&M | General | Developer | CIP Year | OPCC (2025 dollars) | OPPC (2025 dollars) | City of Everson Share of Cost (2025 dollars) |
|---|---|---|---|---|---|---|---|---|---|
| **Pump Station Capital Improvements** | | | | | | | | | |
| Flow Meter Installation Program[3] | | | ☑ | ☑ | | TBD | $783,000 | $999,000 | $999,000 |
| PS 5 Mechanical Replacement | | ☑ | | | | 2026 | $178,000 | $235,000 | $235,000 |
| PS 6 Mechanical Replacement | | ☑ | | | | 2031 | $178,000 | $235,000 | $235,000 |
| PS 7 Mechanical Replacement | | ☑ | | | | 2026 | $178,000 | $235,000 | $235,000 |
| PS 8 Mechanical Replacement/Upgrade | ☑ | ☑ | | | | 2026 | $178,000 | $235,000 | $235,000 |
| PS 10 Mechanical Replacement, Except Pumps | | ☑ | | | | 2026 | $111,000 | $147,000 | $147,000 |
| PS 11 Mechanical replacement/upgrade | ☑ | ☑ | | | | 2036 | $178,000 | $235,000 | $235,000 |
| PS 13 Upgrade pumps | ☑ | | | | | 2039 | $30,000 | $40,000 | $40,000 |
| Southwest Mini-Basin New PS and FM[4] | | | | | ☑ | N/A | -- | -- | -- |
| East UGA New PS and FM[4] | | | | | ☑ | N/A | -- | -- | -- |
| **Pump Station Sub-Totals** | | | | | | | **$1,814,000** | **$2,361,000** | **$2,321,000** |

| Capital Improvement | Capacity | Obsolescence | O&M | General | Developer | CIP Year | OPCC (2025 dollars) | OPPC (2025 dollars) | City of Everson Share of Cost (2025 dollars) |
|---|---|---|---|---|---|---|---|---|---|
| **Collection System Piping Capital Improvements** | | | | | | | | | |
| PS 4 Relocation Design[1][2] | ☑ | | | ☑ | | 2026 | -- | $703,000 | $235,000 |
| PS 4 Relocation Construction[1] | ☑ | | | | | 2027 | $3,973,000 | $4,533,000 | $1,511,000 |
| Mini Basin 6 Sewer Improvements Design | ☑ | | | ☑ | | 2028 | -- | $372,000 | $372,000 |
| Mini-Basin 6 Sewer Improvements Construction | ☑ | | | | | 2029 | $1,746,000 | $1,968,000 | $1,968,000 |
| Flow Monitoring Study[5] | | | ☑ | ☑ | | TBD | -- | $80,000 | $40,000 |
| Southwest mini-basin Collector[4] | | | | | ☑ | N/A | -- | -- | -- |
| East UGA Collector[4] | | | | | ☑ | N/A | -- | -- | -- |
| W-NW UGA Collector[4] | | | | | ☑ | N/A | -- | -- | -- |
| W-S UGA Collector[4] | | | | | ☑ | N/A | -- | -- | -- |
| W-SW UGA Collector[4] | | | | | ☑ | N/A | -- | -- | -- |
| **Collection System Piping Subtotal** | | | | | | | **$5,683,000** | **$7,656,000** | **$4,126,000** |
| **Estimated Total Cost** | | | | | | | **$7,497,000** | **$10,017,000** | **$6,487,000** |

| Capital Improvement | Capacity | Obsolescence | O&M | General | Developer | CIP Year | OPCC (2025 dollars) | OPPC (2025 dollars) | City of Everson Share of Cost (2025 dollars) |
|---|---|---|---|---|---|---|---|---|---|

Notes:

1) Costs are assumed to be shared with the City of Nooksack at a two-thirds Nooksack to one-third Everson cost split.
2) Design includes survey, site reconnaissance (geotechnical, cultural, biological) and permitting.
3) Costs assume nine existing pump stations have meters installed.
4) Sewer service installation will be developer funded but are included to depict how these areas will be provided sewer service.
5) The Flow Monitoring Study cost is assumed to be shared evenly with the City of Nooksack.

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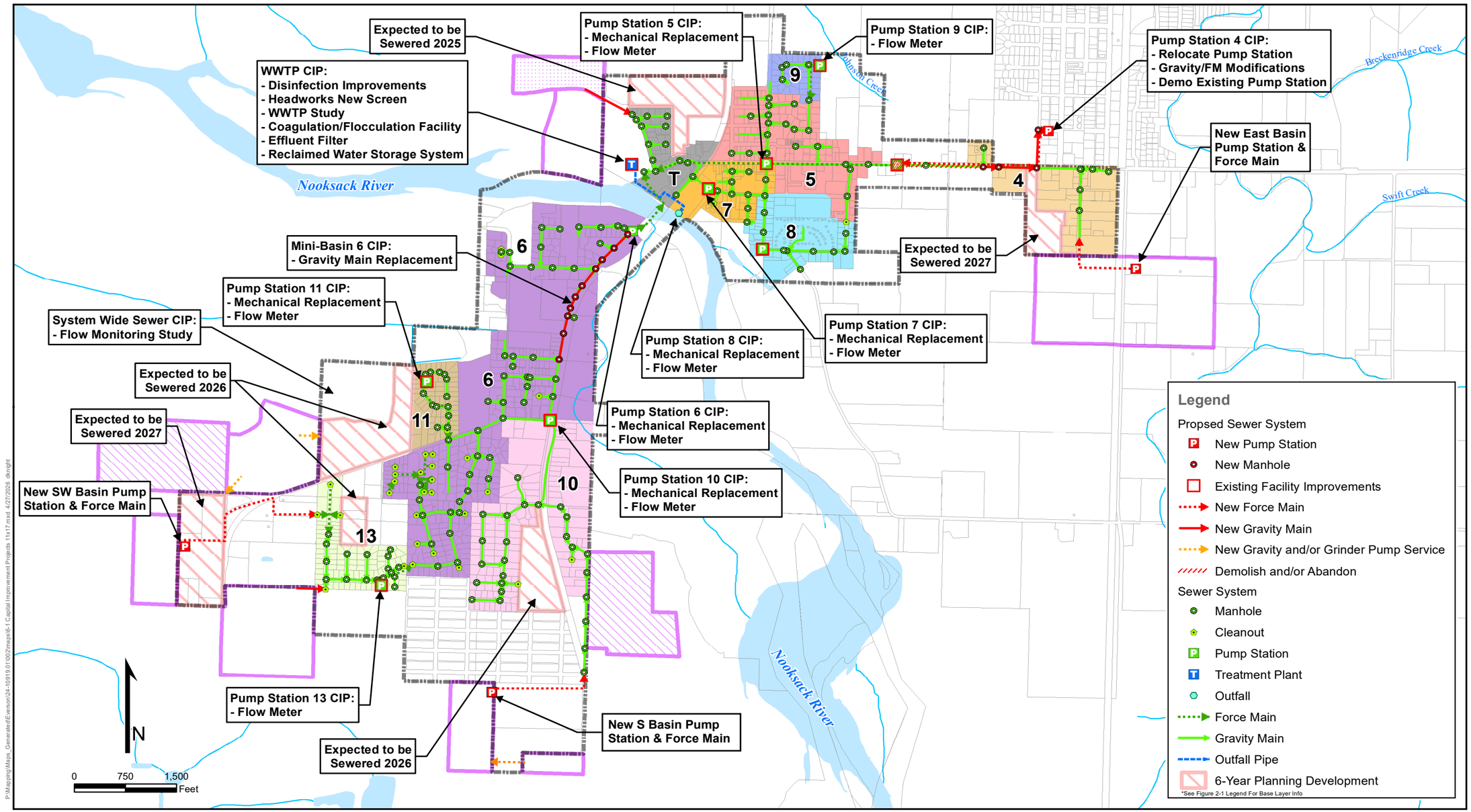


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GIS Data: City of Everson & Whatcom County.
Data sources supplied may not reflect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

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city of everson

## Capital Improvement Projects

General Sewer Plan
City of Everson, Washington
April 2026

Figure 6-1

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# Chapter 7 Projected Wastewater Treatment Plant Loads

<The following replaces "Chapter 7 Projected Wastewater Plant Loads" in the *2012 General Sewer Plan* (2012 GSP) in its entirety>

Proposed wastewater treatment plant upgrades and improvements are based on projected flows and loadings through the year 2045. Wastewater flows and loadings are projected based on population growth and an average per capita wastewater generation rate based on historical flow data.

## 7.1 Existing Wastewater BOD Loading

Influent wastewater quality samples are collected from manholes upstream of the headworks at the WWTP. The collected wastewater represents flow from all sources, including residential, commercial, institutional, industrial, and infiltration and inflow. The design criteria for 5-day biochemical oxygen demand (BOD) at the Everson WWTP are expressed in terms of maximum month, average day conditions for BOD loading. The present plant design capacity for BOD, as approved by Ecology, is 1,149 pounds per day (ppd).

Historical BOD loadings were determined by an analysis of influent data for the WWTP. Monthly loading data as reported on DMR records for the period of years 2020 through 2023 were analyzed to determine average per capita BOD loadings. These same data were also analyzed to determine appropriate peaking factors to establish maximum month, average day loadings relative to average annual loadings for future service area populations.

### 7.1.1 Historical Average Annual and Maximum Monthly BOD Loading

Table 7-1 presents monthly average BOD loadings, average annual BOD loadings, and per capita BOD loadings for the Everson WWTP during the years 2020 to 2023. Average annual loadings are calculated as the average of the monthly BOD loadings. The annual average BOD loadings vary between a low of 579 and a high of 663 ppd during the period. The peak monthly BOD loadings for each year have ranged from 674 ppd in recent years to 737 ppd, which represents a range of 59 to 64 percent of the present design capacity (1,149 ppd) of the treatment facilities.

### Table 7-1
### Monthly BOD Loading Summary (2020-2023)

| Month/Year | Average BOD Loading (pounds per day)[1] | | | |
|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 |
| January | ***737*** | 471 | 644 | ***674*** |
| February | 647 | 555 | 596 | 586 |
| March | 721 | 569 | 630 | 616 |
| April | 672 | 538 | 666 | 592 |
| May | 668 | 549 | 616 | 588 |
| June | 725 | 556 | 574 | 642 |
| July | 666 | 634 | 571 | 580 |
| August | 534 | 598 | 508 | 574 |
| September | 699 | 617 | 579 | 645 |
| October | 729 | 579 | ***681*** | 613 |
| November | 685 | ***694*** | 648 | 618 |
| December | 469 | 588 | 638 | 651 |
| **Average Annual** | **663** | **579** | **613** | **615** |
| Population | 4359 | 4,450 | 4,620 | 4,744 |
| **Pounds per Day per Capita** | **0.152** | **0.130** | **0.133** | **0.130** |
| **Average Pounds per Day per Capita (ppdc)** | | | | **0.136** |

Note:
1) Maximum month for each year shown in bold italics.

The average per day per capita BOD loading for the four years is approximately 0.136, which is low for domestic BOD. However, since the data from the Everson WWTP is consistent, the 0.136 pounds per day per capita is assumed to be appropriate to use for future projections.

The monthly BOD loading data were used to develop a peak month BOD factor for projecting future BOD loadings. Table 7-2 presents peak month domestic wastewater BOD loadings for the Everson WWTP during the years 2020 through 2023.

### Table 7-2
### Peak Month Domestic BOD Loadings in Pounds per Day

| Year | Peak Month Loading | Peak Month | Average Annual Loading | Peak to Average Ratio |
|---|---|---|---|---|
| 2020 | 737 | January | 663 | 1.11 |
| 2021 | 694 | November | 579 | 1.20 |
| 2022 | 681 | October | 613 | 1.11 |
| 2023 | 674 | January | 615 | 1.10 |
| | | | **Maximum** | 1.20 |

The ratio of peak month to average annual BOD loading averaged about 1.13 and is used in projecting future peak month BOD loads.

Peak day BOD loadings for 2020 through 2023 are summarized in Table 7-3 along with the ratio of peak day BOD loadings to average annual BOD loadings.

**Table 7-3**
**Peak Day Domestic BOD Loadings in Pounds per Day**

| Year | Peak Day Loading | Average Annual Loading | Peak to Average Ratio |
|---|---|---|---|
| 2020 | 1131 | 663 | 1.71 |
| 2021 | 913 | 579 | 1.58 |
| 2022 | 1066 | 613 | 1.74 |
| 2023 | 991 | 615 | 1.61 |
| | | **Maximum** | 1.74 |

## 7.2 Historic Wastewater Total Suspended Solids (TSS) Loading

In addition to flow and BOD loading, the Everson WWTP treatment capacity is expressed in terms of maximum month, average day conditions for TSS loading. The plant design capacity for TSS, as approved by Ecology, is 1,110 ppd.

As with BOD, historical TSS loadings were determined by an analysis of influent data for the WWTP. Monthly loading data as reported on DMR records for the period of years 2020 through 2023 were analyzed to determine average pounds per capita TSS loadings. These same data were also analyzed to determine appropriate peaking factors to establish maximum month, average day loadings relative to average annual loadings for future service area populations.

### 7.2.1 Average Annual

Table 7-4 presents monthly and average annual TSS loadings for the Everson WWTP during the years 2020 to 2023. Average annual loadings are calculated as the average of the monthly TSS loadings. The annual average TSS loadings vary between a low of 577 and a high of 706 pounds per day during the period. Monthly maximum TSS loadings range from 721 to 939 ppd, which represents a range of 65 to 85 percent of the permitted capacity (1,110 ppd) of the plant.

The average annual, per capita values and monthly peaking factors for domestic wastewater TSS loading are also summarized in Table 7-4.

### Table 7-4
### Monthly TSS Loading Summary

| Month/Year | Average TSS Loading (pounds per day) | | | |
|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 |
| January | 669 | 532 | ***721*** | 798 |
| February | 767 | 525 | 512 | 595 |
| March | 699 | 703 | 547 | 554 |
| April | 731 | 604 | 553 | 621 |
| May | 375 | 653 | 585 | 674 |
| June | 308 | 587 | 566 | ***939*** |
| July | 756 | 607 | 595 | 788 |
| August | 749 | 588 | 632 | 768 |
| September | 797 | 608 | 542 | 725 |
| October | ***937*** | 584 | 580 | 697 |
| November | 690 | ***734*** | 524 | 721 |
| December | 520 | 614 | 562 | 592 |
| **Average Annual** | **667** | **611** | **577** | **706** |
| Population | 4,359 | 4,450 | 4,620 | 4,744 |
| **Pounds per Day per Capita** | **0.153** | **0.137** | **0.125** | **0.149** |
| **Average Pounds per Day per Capita** (ppdc) | | | | **0.141** |

Note:
1) Maximum month for each year shown in bold italics.

Per capita TSS loadings from 2020 through 2023 averaged about 0.141 pounds per day per capita. While this is a low average, the data from the Everson WWTP is very consistent and therefore, the 0.141 pounds per day per capita will be used for future projections.

Table 7-5 presents peak month domestic wastewater TSS loadings for the Everson WWTP during the years 2020 through 2023.

**Table 7-5**
**Peak Month Domestic TSS Loadings in Pounds per Day**

| Year | Peak Month Pounds | Peak Month | Average Annual TSS | Peak to Average Ratio |
|---|---|---|---|---|
| 2020 | 937 | October | 667 | 1.41 |
| 2021 | 734 | November | 611 | 1.20 |
| 2022 | 721 | January | 577 | 1.25 |
| 2023 | 939 | June | 706 | 1.33 |
| | | | **Maximum** | 1.41 |

The ratio of peak month to average annual TSS loading averaged about 1.30 and is used in projecting future peak month TSS loads.

Peak day TSS loadings for 2020 through 2023 are summarized in Table 7-6 along with the ratio of peak day TSS loadings to average annual TSS loadings.

**Table 7-6**
**Peak Day Domestic TSS Loadings in Pounds per Day**

| Year | Peak Day Loading | Average Annual Loading | Peak to Average Ratio |
|---|---|---|---|
| 2020 | 1227 | 667 | 1.84 |
| 2021 | 1649 | 611 | 2.70 |
| 2022 | 1164 | 577 | 2.02 |
| 2023 | 1579 | 706 | 2.24 |
| | | **Maximum** | 2.70 |

## 7.3 Projected Unit Loadings

BOD and TSS loadings for domestic wastewater were reviewed from the 4-year period of record at the WWTP. As discussed above, 0.136 and 0.141 pounds per day per capita will be used for future projections for BOD and TSS, respectively.

### 7.3.1 Peaking Factors

Peaking factors are commonly used to project the total peak wastewater loadings at the WWTP. Peaking factors are used to project design flows and loadings for sizing of treatment facilities upgrades and improvements. The peak month peaking factors for domestic wastewater BOD loading were derived from the 4-year period shown in Table 7-2.

The average peak month BOD peaking factor for domestic wastewater BOD loading shown in Table 7-2 is about 1.13. This average is believed appropriate for projecting future peak month loads.

The peak month peaking factors for domestic wastewater TSS loading were derived from the 4-year period evaluated as shown in Table 7-5. The average peak month TSS peaking factor for domestic wastewater TSS is 1.30. This average is believed appropriate for projecting future peak month loads.

## 7.4 Projected Average Annual Loading

The total wastewater BOD and TSS loading can generally be characterized as domestic. Projection of the average annual BOD and TSS loading can assist in planning for future WWTP requirements. Domestic loadings are projected to increase gradually as the population of Everson grows, though per capita loads are not projected to change.

### 7.4.1 Average Annual BOD Loading

The projected average annual BOD loading is shown in Table 7-7.

**Table 7-7**
**Projected Average Annual BOD Loadings (ppd)**

| Parameters | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Population of Everson and Nooksack | 4,543 | 5,504 | 7,147 |
| Average Annual BOD (ppcd) | 0.136 | 0.136 | 0.136 |
| Projected Domestic Loading | 618 | 749 | 973 |

Maximum month BOD loadings are shown in Table 7-8.

**Table 7-8**
**Projected Maximum Month BOD Loadings (ppd)**

| Parameters | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Peak Month BOD Factor | 1.20 | 1.20 | 1.20 |
| Peak MonthBOD (ppcd) | 0.163 | 0.163 | 0.163 |
| Projected Max Month BOD Loading | 741 | 898 | 1,166 |

The plant is currently permitted for a maximum month influent BOD load of 1,149 pounds per day. Therefore, the WWTP is projected to exceed BOD capacity in 2044.

### 7.4.2 Annual TSS Loading

The projected average annual TSS loading is shown in Table 7-9.

**Table 7-9**
**Projected Average Annual TSS Loadings (ppd)**

| Parameters | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Population | 4,543 | 5,504 | 7147 |
| Average Annual TSS (ppcd) | 0.141 | 0.141 | 0.141 |
| Projected Domestic Loading | 641 | 776 | 1,008 |

Maximum month TSS loadings are shown in Table 7-10.

**Table 7-10**
**Projected Maximum Month TSS Loadings (ppd)**

| Parameters | 2020-2023 | 2031 | 2045 |
|---|---|---|---|
| Peak Month TSS Factor | 1.41 | 1.41 | 1.41 |
| Peak MonthTSS (ppcd) | 0.198 | 0.198 | 0.198 |
| Projected Max Month TSS Loading | 900 | 1,090 | 1,416 |

The plant is currently permitted for a maximum month influent TSS load of 1,110 pounds per day. Therefore, the WWTP is projected to exceed BOD capacity in 2031.

## 7.5 Nutrients

Nutrients reduction in the treated effluent has recently come under regulatory review. Currently the Puget Sound Nutrient Source Reduction Project, headed by the Department of Ecology (Ecology), is beginning to impose nitrogen limitations on direct discharges to the Puget Sound. Indications are that discharges to Puget Sound tributary rivers will have limitations imposed next at some point in a future permit cycle. This is still likely several years away. Phosphorus is also a critical nutrient that is being monitored but no official planning has been made regarding discharge limits. The City is required to take a single daily sample quarterly for nutrients, Table 7-11 summarizes the nutrients discharges as reported by the City to Ecology.

**Table 7-11**
**WWTP Nutrients Discharge Concentrations**

| Year | Total Nitrogen (TN) | Total Phosphorus (TP) |
|---|---|---|
| Average Annual, mg/L | 16.8 | 2.46 |
| Daily Maximum, mg/L | 20.5 | 3.69 |

Regarding nitrogen removal, the City's WWTP process does achieve some denitrification, which varies seasonally, but not to the limits being proposed. Preliminary discussions have suggested a step in total nitrogen (TN) limits approach for facilities. Initially discharge limits could be 8 mg/L year round. Then limits could be increased to seasonal, 3 mg/L TN in the warmer months and 8 mg/L TN in the colder but this has yet to be determined. A nutrient removal evaluation will be needed conducted on the treatment plant to plan for nitrogen removal modifications and/or implementations to the WWTP within the planning period.

## 7.6 Summary

The per capita loadings as developed through this analysis differ only slightly from those based on values recommended for design of wastewater treatment facilities (Criteria for Sewage Works Design, Ecology, 2008). The resulting projected BOD and TSS loadings are believed appropriate for the City of Everson WWTP.

# Chapter 8 Evaluation of Treatment Alternatives

<This Chapter includes updates and amendments for Chapter 8 "Evaluation of Treatment Alternatives" in the *2012 General Sewer Plan (2012 GSP)*>

<The following replaces introductory paragraph and Section 8.1 "Treatment/Discharge Requirements">

Proposed improvements to the City of Everson Wastewater Treatment Plant were evaluated based on a review of current treatment facilities design flow and loading capacity, projected flow and loading rates to the year 2045, and economic considerations. The purpose of this comparative analysis is to facilitate the selection of associated facility improvements. The costs of improvements at the plant are shared with two-thirds City of Everson and one-third City of Nooksack based on the understanding of cost sharing between the cities. In addition to technical and economic considerations, other non-economic factors, such as future water quality regulations and requirements, system operation and reliability, environmental issues, phasing, and public acceptance, are presented and discussed.

## 8.1 Treatment/Discharge Requirements

### 8.1.1 NPDES Permit Requirements

National Pollution Discharge Elimination System (NPDES) permit (Permit No. WA-002043-5) for the City of Everson for discharge of treated effluent into the Nooksack River was last issued on October 1, 2017. The facility is classified as a Class II plant.

The NPDES permit sets requirements for effluent discharge at the treatment plant outfall, monitoring and facility loading. In addition, pretreatment requirements for commercial and industrial users are defined, as well as requirements for the outfall structure, effluent mixing zone, and operation and maintenance.

Table 8-1 summarizes the current Treatment/Discharge requirements. The limits for BOD, TSS, pH, and Total Residual Chlorine are technology-based. The Fecal Coliform Bacteria limit is based on a Total Daily Maximum Load (TMDL) analysis conducted by Ecology.

**Table 8-1**
**Effluent Limitations at Outfall**

| Parameter | Average Monthly | Average Weekly |
|---|---|---|
| Biochemical Oxygen Demand (BOD) | 30 mg/L, 165 lb/day | 45 mg/L, 248 lb/day |
| Total Suspended Solids (TSS) | 30 mg/L, 165 lb/day | 45 mg/L, 248 lb/day |
| Fecal Coliform Bacteria | 28/100 mL | 400/100 mL |
| pH | Daily Min is equal to or greater than 6 and Daily Max is less than or equal to 9. | |
| Total Residual Chlorine | 0.1 mg/L | 0.2 mg/L (Max. Daily Limit) |

The Everson WWTP treatment capacity is expressed in terms of maximum month, average day conditions for flow, biochemical oxygen demand (BOD) loading and total suspended solids (TSS) loading. The current plant design capacities, as approved by Ecology, are as follows:

- Flow – 0.661 million gallons per day (MGD)
- BOD Loading – 1,149 pounds per day (lbs/day)
- TSS Loading – 1,110 lbs/day

### 8.1.2 Industrial

<No updates were made to Section 8.1.2 “Industrial” as the 2012 GSP is still accurate>

### 8.1.3 Surface Water Quality Criteria

<No updates were made to Section 8.1.3 “Surface Water Quality Criteria” as the 2012 GSP is still accurate>

### 8.1.4 Design Criteria for Existing Wastewater Treatment Facilities

The WWTP upgrade design was completed in 2017. The Design Criteria for the various unit processes are summarized in Table 8-2.

## Table 8-2
## Wastewater Treatment Facilities Design Criteria

| | |
|---|---|
| **Flow, mgd** | |
| Average Annual (AA) | 0.478 |
| Maximum Month (MM) | 0.661 |
| Peak Day (PD) | 1.43 |
| Peak Hour (PH) | 1.502 |
| **BOD, lbs/day** | |
| Average Annual | 926 |
| Maximum Month | 1,149 |
| Peak Day | 2,200 |
| **TSS, lbs/day** | |
| Average Annual | 921 |
| Maximum Month | 1,110 |
| Peak Day | 2,085 |
| **TN, lbs/day** | |
| Average Annual | 159 |
| Maximum Month | 221 |
| Peak Day | 239 |
| **Influent Pump Station** | |
| Number of Pumps | 3 |
| Capacity (1 pump), gpm, ea | 400 |
| Capacity (2 pumps), gpm, ea | 775 |
| Firm capacity, gpm | 1,100 |
| Firm capacity, MGD | 1.58 |
| **Biological Selectors** | |
| Volume | |
| Reactor 1A, gal | 3,000 |
| Reactor 1B, gal | 3,000 |
| Reactor 2, gal | 6,000 |
| Mixed liquor mass | |
| Reactor 1A, lbs | 75 |
| Reactor 1B, lbs | 75 |
| Reactor 2, lbs | 150 |

| | |
|---|---|
| %VS | 87% |
| Food to Mass (F/M) Ratio @ AA | |
| Reactor 1A, lb BOD/ lb VSS | 14.2 |
| Reactor 1B, lb BOD/ lb VSS | 14.2 |
| Reactor 2, lb BOD/ lb VSS | 7.1 |
| **Oxidation Ditch No. 1** | |
| Straight length, feet | 100 |
| Width/end diameter, feet | 20 |
| Maximum side water depth, feet | 7.33 |
| Volume, gallons | 128,000 |
| **Oxidation Ditch No. 2** | |
| Straight length, feet | 104 |
| Width/ end diameter, feet | 26 |
| Maximum side water depth, feet | 5.62 |
| Volume, gallons | 137,000 |
| **Combined Oxidation Ditches** | |
| Total Ditch Volume, gallons | 265,000 |
| Detention @ MM, hours | 9.6 |
| Mixed liquor concentration, mg/L | 3,000 |
| Mixed liquor mass, lbs | 6,630 |
| Mixed liquor volatile fraction, % | 87% |
| MM F/M ratio, lb BOD/ lb VSS | 0.199 |
| MM Volumetric loading, lbs/1,000cf | 32.4 |
| Sludge yield, lbs sludge/ lb BOD | 0.7 |
| Solids retention time (SRT) @ AA, days | 10.2 |
| SRT @ MM, days | 8.2 |
| MM Oxygen Demand | |
| AOR req'd (BOD), lbs O2/ hour | 52.7 |
| AOR req'd (BOD+NH3), lbs O2/ hour | 94.9 |
| SOTR req'd (BOD+NH3), lbs O2/hr | 145.8 |
| Jet Aeration System | |
| Manifolds, per ditch | 2 |
| Motiver Pumps per dtich | |
| Number, ea | 2 |

| | |
|---|---|
| GPM, ea, nominal | 2,200 |
| Blowers per ditch | |
| Number, ea | 1 |
| Capacity SCFM, ea | 1,077 |
| Pressure, psi | 3.0 |
| **Oxidation Ditch No. 1 Aeration** | |
| PD SAE, lb O2/BHP-hr | 1.92 |
| MM SAE, lb O2/BHP-hr | 1.69 |
| MM Air Flow, SCFM | 723 |
| **Oxidation Ditch No. 2 Aeration** | |
| PD SAE, lb O2/BHP-hr | 1.95 |
| MM SAE, lb O2/BHP-hr | 1.88 |
| MM Air Flow, SCFM | 840 |
| **Secondary Clarifiers** | |
| Number, each | 2 |
| Diameter, feet | 30 |
| Side water depth, feet | 13 |
| Area each, sq feet | 707 |
| Surface overflow rate, gpd/sf: | |
| @ max mo. flow | 468 |
| @ peak day flow | 1,012 |
| Solids loading rate, lbs/sf/hour: | |
| @ max mo. flow | 0.73 |
| @ peak day flow | 1.58 |
| **Activated Sludge Pumping** | |
| Number of Pumps | 3 |
| Capacity RAS, gpm, ea | 520 |
| Capacity WAS, gpm, ea | 415 |
| MM RAS average, gpm | 238 |
| PD RAS average, gpm | 515 |
| **Chlorine Contact Tank** | |
| Volume, gallons | 16,061 |
| Detention @ avg annual, minutes | 48.4 |
| Detention @ max month, minutes | 35.0 |

| | |
|---|---|
| Detention @ peak day, minutes | 16.2 |
| **Sludge Holding Tank** | |
| Diameter, feet | 17 |
| Side water depth, feet | 9.5 |
| Volume, gallons | 16,129 |
| Sludge wasted, dry lbs/day | 804 |
| Sludge wasted, dry tons/year | 147 |
| Sludge wasted @ 1.5% solids, gpd | 6,429 |
| Residence time, days | 2.5 |
| **Sludge Thickener** | |
| Number, each | 1 |
| Capacity, gpm | 20 |
| Thickened Sludge, %TS | 6% |
| MM Loading Operations, hrs/wk | 100 |
| **Effluent Pump Station** | |
| Number of Pumps | 2 |
| Capacity, gpm, ea | 1,050 |
| Firm capacity, gpm | 1,050 |
| Firm capacity, MGD | 1.51 |

### 8.1.5 Wastewater Treatment Plant Performance

As summarized in the effluent quality data presented in Table 8-3, wastewater treatment performance with respect to effluent water quality has been very good.

**Table 8-3**
**Everson WWTP – Year 2023 Effluent Quality**

| Month | BOD in mg/l | | TSS in mg/l | | Fecal Coliform in number/100 ml | |
|---|---|---|---|---|---|---|
| | Average Month | Maximum Week | Average Month | Maximum Week | Average Month | Maximum Week |
| January | 13 | 16 | 15 | 20 | 6 | 16 |
| February | 11 | 12 | 14 | 19 | 5 | 8 |
| March | 10 | 12 | 10 | 15 | 3 | 14 |
| April | 11 | 14 | 10 | 15 | 5 | 20 |
| May | 11 | 13 | 9 | 11 | 4 | 6 |
| June | 11 | 14 | 8 | 9 | 5 | 9 |
| July | 14 | 16 | 11 | 14 | 3 | 3 |
| August | 9 | 12 | 6 | 11 | 1 | 1 |
| September | 9 | 12 | 6 | 8 | 1 | 1 |
| October | 10 | 13 | 6 | 11 | 3 | 3 |
| November | 9 | 11 | 9 | 12 | 16 | 90 |
| December | 9 | 13 | 10 | 14 | 2 | 3 |
| **Permit Limit** | **30** | **45** | **30** | **45** | **28** | **400** |

Plant monthly effluent BOD and TSS have averaged about 10 mg/l and 9 mg/l, respectively; which is considerably below the monthly average permit limit of 30 mg/l. Effluent fecal coliform concentrations have averaged about 5 per 100 ml, which is also considerably below the permit limit of 28 per 100 ml and is therefore in compliance with the Fecal Coliform Bacteria TMDL adopted for the Nooksack River. However, the average monthly value for fecal coliform in November exceeded the permit limit.

Maximum weekly values are also shown in Table 8-3 and are shown to be consistently below discharge permit limits.

<The following replaces Section 8.2 “Recent Wastewater Treatment Plant Improvements”>

## 8.2 Recent Wastewater Treatment Plant Improvements

Two WWTP projects have been implemented since the 2012 GSP and consisted of:

- Outfall Relocation project: The City’s Nooksack River outfall was extended up river approximately 500 lineal feet where a single-port side-bank diffuser was installed. Construction was completed in 2015.
- WWTP Upgrades project: The WWTP Upgrades consisted of construction of a new influent metering manhole; replacement of the Influent Pump Station, including a new valve vault; replacement of existing RAS pumps, piping, and appurtenances; removal of existing rotor aeration system with a jet aeration system (blowers, pumps, piping, and appurtenances) in the oxidation ditches to increase treatment capacity; installation of a 12,000 gallon biological selector tank within

a new 295 square foot structure to minimize filamentous bacteria growth and to expand the capacity of the secondary clarifiers; construction of a new 750 square foot Operations Building; renovate and repurpose existing lab building into the Process Building to house new electrical and sludge handling equipment; installing blowers for jet aeration system in the Main Control Building; installation of a new aeration system in Sludge Holding Tank; upgrades to the Chlorine Contact Chamber, including a new effluent weir, chlorine and pH analyzers, and effluent piping; installation of an internal plant water system utilizing chlorinated plant effluent; installation of a new back-up power generator; upgrades to the SCADA system; installation of electrical components and yard piping associated with the above project components. Construction was completed in 2017.

<The following replaces Section 8.3 “Wastewater Treatment Plant Design Flow and Loads”>

## 8.3 Wastewater Treatment Plant Design Flows and Loads

The wastewater treatment facility design flows and loads compared to the projected flows and loads described in this Plan are summarized in Table 8-4.

## Table 8-4
## Everson WWTP – Design versus Projected Flows and Loads

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| **Population** | 6,398 | | 4,543 | 5,504 | 7,147 | | |
| | | | | | | | |
| **Flow, mgd** | | | | | | | |
| Average Annual (AA) | 0.478 | | 0.300 | 0.364 | 0.473 | | |
| Maximum Month (MM) | 0.661 | 0.661 | 0.445 | 0.541 | 0.703 | Exceeds 85% ~2032, design ~2041 | |
| Peak Day (PD) | 1.43 | | 0.811 | 0.985 | 1.279 | | |
| Peak Hour (PH) | 1.502 | | 1.056 | 1.258 | 1.589 | Exceeds 85% ~2032, Design ~2041 | |
| **BOD, lbs/day** | | | | | | | |
| Average Annual | 926 | | 618 | 765 | 973 | | |
| Maximum Month | 1,149 | 1,149 | 741 | 916 | 1,166 | Exceeds 85% ~2035, Design ~2044 | |
| Peak Day | 2,200 | | 991 | 1,330 | 1,692 | | |
| **TSS, lbs/day** | | | | | | | |
| Average Annual | 921 | | 641 | 792 | 1,008 | | |
| Maximum Month | 1,110 | 1,110 | 900 | 1,090 | 1,416 | Exceeds 85% ~2024, Design ~2031 | |
| Peak Day | 2,085 | | 1,579 | 2,093 | 2,718 | | |
| **TN, lbs/day** | | | | | | | |
| Average Annual | 159 | | 100 | 122 | 148 | assumes 40 mg/L TKN as N | |
| Maximum Month | 221 | | 149 | 181 | 234 | assumes 40 mg/L TKN as N | |
| Peak Day | 239 | | 169 | 205 | 267 | assumes 25 mg/L TKN as N | |
| | | | | | | | |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| **Influent Pump Station** | | | | | | | |
| Number of Pumps | 3 | | | | | | |
| Capacity (1 pump), gpm, ea | 400 | | | | | | |
| Capacity (2 pumps), gpm, ea | 775 | | | | | | |
| Firm capacity, gpm | 1,100 | | | | | | |
| Firm capacity, MGD | 1.58 | | 1.056 | 1.258 | 1.589 | Exceeds design ~2045 | |
| | | | | | | | |
| **Influent Mechanical Spiral Screen** | | | | | | | |
| Number of Screens | 1 | | | | | | |
| Channel width, ft | 1.0 | | | | | | |
| Aperture size, in | 0.25 | | | | | | |
| Capacity, MGD | 1.5 | | 1.5 | 1.5 | 1.5 | | |
| Headloss at Capacity, in | 18 | | | | | | |
| | | | | | | | |
| **Biological Selectors** | | | | | | | |
| Volume | | | | | | | |
| Reactor 1A, gal | 3,000 | | | | | | |
| Reactor 1B, gal | 3,000 | | | | | | |
| Reactor 2, gal | 6,000 | | | | | | |
| Mixed liquor mass | | | | | | | |
| Reactor 1(A+B), lbs | 150 | | 149 | 150 | 150 | | |
| Reactor 2, lbs | 300 | | 149 | 150 | 150 | | |
| %VS | 87% | | 83.8% | 83.8% | 83.8% | Metcalf & Eddy; fifth edition | |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | **Potential item of concern (see discussion in text)** | | | | | | |
| | **Out of range, above design, or exceeds projected flows/loads** | | | | | | |
| Food to Mass (F/M) Ratio @ AA | | | | | | | |
| Reactor 1(A+B), lb BOD/ lb VSS | 7.1 | | 4.9 | 6.0 | 7.7 | 6 to 8 | |
| Reactor 2, lb BOD/ lb VSS | 2.4 | | 2.4 | 3.0 | 3.9 | 3 to 4 | |
| | | | | | | | |
| **Oxidation Ditch No. 1** | | | | | | | |
| Straight length, feet | 100 | | | | | | |
| Width/end diameter, feet | 20 | | | | | | |
| Maximum side water depth, feet | 7.33 | | | | | | |
| Volume, gallons | 128,000 | | | | | | |
| **Oxidation Ditch No. 2** | | | | | | | |
| Straight length, feet | 104 | | | | | | |
| Width/end diameter, feet | 26 | | | | | | |
| Maximum side water depth, feet | 5.62 | | | | | | |
| Volume, gallons | 137,000 | | | | | | |
| | | | | | | | |
| **Combined Oxidation Ditches** | | | | | | Metcalf & Eddy; fifth edition | |
| Total Ditch Volume, gallons | 265,000 | | 265,000 | 265,000 | 265,000 | **Table 8-19** | **Table 8-19** |
| Detention @ MM, hours | 9.6 | | 14.3 | 11.8 | 9.1 | 15-30 | 3-6 |
| Mixed liquor concentration, mg/L | 3,000 | | 2,980 | 3,000 | 3,000 | MLSS = 3,000-5,000 | MLSS = 1,500-4,000 |
| Mixed liquor mass, lbs | 6,630 | | 6,586 | 6,630 | 6,630 | | |
| Mixed liquor volatile fraction, % | 87% | | 83.8% | 83.8% | 83.8% | | |
| MM F/M ratio, lb BOD/ lb VSS | 0.199 | | 0.134 | 0.161 | 0.210 | 0.04-0.10 | 0.20-0.60 |
| MM Volumetric loading, lbs/1,000cf | 32.4 | | 20.9 | 25.3 | 32.9 | 5-15 | 20-100 |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| Sludge yield, lbs sludge/ lb BOD | 0.7 | | 0.93 | 0.93 | 0.93 | | |
| Solids retention time (SRT) @ AA, days | 10.2 | | 11.4 | 9.5 | 7.3 | 15-30 | 3-15 |
| SRT @ MM, days | 8.2 | | 9.5 | 7.9 | 6.1 | process: nitrification(↓), sludge yield(↑) | |
| MM Oxygen Demand | | | | | | | |
| AOR req'd (BOD), lbs O2/ hour | 52.7 | | 34.0 | 41.1 | 53.4 | 1.1 lbs/lb BOD | |
| AOR req'd (BOD+NH3), lbs O2/ hour | 94.9 | | 62.4 | 75.7 | 98.4 | 1.1 lbs/lb BOD; 4.6 lbs/lb NH3 | |
| SOTR req'd (BOD+NH3), lbs O2/hr | 145.8 | | 95.9 | 116.3 | 151.0 | Exceeds MM design but not peak day | |
| Jet Aeration System | | | | | | | |
| Manifolds, per ditch | 2 | | | | | | |
| Motiver Pumps per dtich | | | | | | | |
| Number, ea | 2 | | | | | | |
| HP, ea | 15 | | | | | | |
| GPM, ea, nominal | 2,200 | | | | | | |
| Blowers per ditch | | | | | | | |
| Number, ea | 1 | | | | | + 1 standby, 3 total | |
| HP, ea | 30 | | | | | | |
| Capacity SCFM, ea | 1,077 | | | | | | |
| Pressure, psi | 3.0 | | | | | | |
| Total BHP Per Ditch | 52.9 | | | | | | |
| MM Standard Aeration Efficiency, lb O2/BHP-hr per ditch | 1.38 | | 0.91 | 1.10 | 1.43 | 1.2 - 2.4 (WEF WSEC-2017-FS-024) | |
| | | | | | | | |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| **Secondary Clarifiers** | | | | | | | |
| Number, each | 2 | | | | | | |
| Diameter, feet | 30 | | | | | | |
| Side water depth, feet | 13 | | | | | | |
| Area each, sq feet | 707 | | | | | Metcalf & Eddy; fifth edition | |
| Surface overflow rate, gpd/sf: | | | | | | **Table 8-34 (Treatment w/ Selectors)** | |
| @ max mo. flow | 468 | | 315 | 383 | 497 | 600-800 | |
| @ peak day flow | 1,012 | | 574 | 697 | 905 | 1,200-1,600; peak design dependent on diurnal duration | |
| @ peak hour flow | 1,062 | | 747 | 890 | 1,124 | | |
| Solids loading rate, lbs/sf/hour: | | | | | | | |
| @ max mo. flow | 0.73 | | 0.49 | 0.60 | 0.78 | 1.0-1.5 | |
| @ peak day flow | 1.58 | | 0.89 | 1.09 | 1.42 | 2.0 | |
| @ peak hour flow | 1.66 | | 1.16 | 1.39 | 1.76 | Exceeds design; still within typical range | |
| | | | | | | | |
| **Activated Sludge Pumping** | | | | | | | |
| Number of Pumps | 3 | | | | | Metcalf & Eddy; fifth edition | |
| Capacity RAS, gpm, ea | 520 | | | | | 100 to 150% design average flow | |
| Capacity WAS, gpm, ea | 415 | | | | | | |
| MM RAS average, gpm | 238 | | 159 | 195 | 253 | | |
| PD RAS average, gpm | 515 | | 290 | 355 | 461 | | |
| | | | | | | | |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| **Chlorine Contact Tank** | | | | | | | |
| Volume, gallons | 16,061 | | | | | Detention times per DOE "Orange" Book | |
| Detention @ avg annual, minutes | 48.4 | | 77.1 | 63.5 | 48.9 | 60 min req exceeded ~2036 | |
| Detention @ max month, minutes | 35.0 | | 51.9 | 42.7 | 32.9 | | |
| Detention @ peak day, minutes | 16.2 | | 28.5 | 23.5 | 18.1 | | |
| Detention @ peak hour, minutes | 15.4 | | 21.9 | 18.4 | 14.6 | 20 minutes req exceeded ~2028 | |
| | | | | | | | |
| **Sludge Holding Tank** | | | | | | | |
| Diameter, feet | 17 | | | | | | |
| Side water depth, feet | 9.5 | | | | | | |
| Volume, gallons | 16,129 | | | | | | |
| Sludge wasted, dry lbs/day | 804 | | 692 | 838 | 1,089 | | |
| Sludge wasted, dry tons/year | 147 | | 126 | 153 | 199 | | |
| Sludge wasted @ 1.5% solids, gpd | 6,429 | | 5,532 | 6,703 | 8,703 | | |
| Residence time, days | 2.5 | | 2.9 | 2.4 | 1.9 | 40 days@20 C (Class B) | |
| | | | | | | | |
| **Sludge Thickener** | | | | | | | |
| Number, each | 1 | | | | | Operations exceed weekly staffing hours but thickener is able to run unattended overnight. Capacity can be considered ~100 hr/wk; Monday morning thru Friday afternoon. | |
| Capacity, gpm | 20 | | | | | | |
| Thickened Sludge, %TS | 6% | | | | | | |
| MM Loading Operations, hrs/wk | 37.5 | | 32.3 | 39.1 | 50.8 | | |
| | | | | | | | |
| **Effluent Pump Station** | | | | | | | |

| Design/Plant Component | Design | NPDES Permit | Year | | | Typical Ditch Design/Notes | Typical CMAS Design/ Notes |
|---|---|---|---|---|---|---|---|
| | | | '20-'23 | 2031 | 2045 | | |
| | Potential item of concern (see discussion in text) | | | | | | |
| | Out of range, above design, or exceeds projected flows/loads | | | | | | |
| Number of Pumps | 2 | | | | | | |
| Capacity, gpm, ea | 1050 | | | | | | |
| Firm capacity, gpm | 1050 | | | | | | |
| Firm capacity, MGD | 1.51 | | 1.056 | 1.258 | 1.589 | Exceeds capacity ~2042 | |

### 8.3.1 WWTP Expansion Project

Projected WWTP influent flow, BOD, and TSS are projected to reach NDPES limits in 2041, 2044, and 2032, respectively, per Table 8-4. As stipulated in the City's NPDES permit section S4.B, the City must submit a plan and a schedule for continuing to maintain capacity to Ecology when the actual flow or load(s) reach 85 percent of any of the design criteria for three consecutive months; design criteria is the max month Flow, BOD, and TSS. The following discussed the design criteria limits and this 85 percent planning trigger. The 85% references below is just when the threshold is met and not three consecutive months for conservative planning.

#### Flow

Flow projections for the planning period predict that the max month flow rating of 0.661 will be exceeded in 2041 and reach 0.710 MGD in 2045. 85 percent is projected to be met in 2032; predicting when three consecutive months is reached is beyond the scope of this evaluation. Therefore, for conservatism this evaluation assumes this occurs in 2032 for planning purposes. Specific areas impacted by flows are discussed further below.

Equipment and process impacted by influent flow rates is the influent pump station, influent screen, effluent pump station, return activated sludge (RAS) pumps, and secondary clarifiers. The influent and effluent pumps are rated at 1,100 gpm; this corresponds to 1.58 MGD. The 1,100 gpm is based on conservative pressure loss calculations and therefore is likely to meet or exceed peak hour flow projections in 2045 but the City should confirm this through draw down testing in the future. The Headworks influent screen is rated at 1.502 MGD; capacity would be reached in 2041. Screening is discussed below as the City already plans to install a new screen. RAS pumps are typically designed to provide 100 to 150 percent of the average design flowrate for the City's treatment process. 150% of 2045 average design flow is 0.710 MGD; the existing RAS pumps are rated to provide 0.75 MGD and therefore are sufficient throughout the planning period. The clarifiers would reach typical peak design parameters for surface overflow and solids loading rates by the end of the planning period and therefore a rerate study is recommended when the 85% trigger is met for flow as it appears the clarification rated design can be increased. This evaluation should at a minimum include a state point analysis, which would include some testing, but the City may also want to perform a full-scale stress test on the clarification process for increased accuracy.

With respect to physical process hydraulics (channels, piping, weirs, etc.), a model was produced using Visual Hydraulics to determine if there were any flow constrictions at the projected 1.59 MGD. Assuming a design RAS flow rate of 50%, the model determined one flow constriction. The Selecter Reactors 1A and 1B discharge weir becomes submerged when applying an aging factor to the 14-inch piping that flows from the Headworks to the Oxidation Ditches. This submerged condition ceases when only applying a standard Hazen-Williams coefficient of 120. This suggests that cleaning this portion of gravity mains would relieve any hydraulic restriction within the planning period.

#### BOD

BOD projections for the planning period anticipates max month loading to reach 1,166 pounds per day in 2045; 85 percent initially occurring in 2035. Again, for conservatism this evaluation assumes three consecutive months occurs that same year for planning purposes.

Increasing BOD capacity generally has the largest impact on the WWTP from a capital cost perspective. Determining the actual implementation to increase capacity cannot be accurately determined at this time

due to future projections beyond this planning period and potential for increased regulations (i.e. nitrogen removal). Therefore, for planning purposes a WWTP study and engineering report are anticipated in the early 2030's as already discussed. Regarding actual implementation costs, expansion is likely to occur in the early 2040's and would be comparable to the last capacity increasing project in 2016. Based on these parameters, the anticipated opinion of probable project cost for planning purposes is $6.6 to 8.1 million in 2025 dollars assuming an effective interest rate of 3 percent.

#### TSS

TSS projections for the planning period anticipates max month loading to reach 1,416 pounds per day in 2031; 85 percent having likely occurred 2024. TSS impacts the biological treatment process of the WWTP.

If the influent TSS concentrations and the volatile fraction percentage of the TSS remain consistent through the planning period, then the WWTP's aeration process should be able to handle the higher TSS mass until 2044. The reason for this is that the WWTP does not have primary treatment and therefore the insoluble BOD and inorganic solids that would normally be removed by primary clarification are designed for as they increase aeration demand. Relating this to process control, staff will generally operate the process based on influent food-to-mass ratio, solids retention time, or mixed liquor suspended solids. At 2045 flows and loads, all three parameters are within typical parameters for BOD removal, additionally the clarifiers appear to remain within typical design parameters for solids loading. Therefore, a rerate study by 2032 would be recommended and should include additional influent testing for evaluation and input into a biological modeling process like Biowin. Additional testing parameters likely requested would be influent ammonia, Total Kjeldahl Nitrogen, alkalinity, filtered chemical oxygen demand (COD), soluble COD, and flocculated-filtered COD. The evaluation should also include a state-point analysis and testing for the clarifiers hydraulic evaluation.

#### WWTP Study Recommendations

As discussed in Chapter 7, a nutrient removal evaluation will likely be needed during the planning period so if regulations are not imposed sooner, then when TSS reaches 85% threshold the City should conduct a facility-wide WWTP process study that includes planning for nitrogen removal implementations, rerating the TSS influent limits and clarification process, as well as include a preliminary evaluation for expanding the WWTP. This study is anticipated to occur in the near-term planning period.

### 8.3.2 Chlorine Contact Capacity

The City disinfects the liquid process stream with chlorine solution in the Chlorine Contract Tanks (CCT) after the clarification process and prior to discharging to the Nooksack River outfall. The existing CCT volume will provide the required 60 minutes of contact time at projected average annual flow rates up until about year 2036. Additionally, the existing CCT volume will provide the required 20 minutes of contact time at projected peak hour flow rates up until about year 2028. Per the Department of Ecology Criteria for Sewage Works Design, contact chambers shall be sized to whichever is greater for the 60 minute average daily flow vs the 20 minute peak design flow.

Based on the current CCT volume of approximately 16,060 gallons, the City would need to increase the volume approximately 37% at a minimum to approximately 22,100 gallons to be able to meet the Department of Ecology requirements by for the planning period projections. The existing CCT footprint is constrained on all side by process tanks, conduit, yardpiping, etc. In review of the site, it is assumed that expansion would occur by constructing additional volume along the eastern side where conflicts are reduced.

### UV Disinfection

Another option for disinfection is ultraviolet (UV) disinfection. This was recommended in the 2012 GSP. UV disinfection is recommended because it is almost instantaneous, eliminates handling chlorine solutions, and does not require a contact basin. Instead a channel or closed pipe is utilized where all equipment and appurtenances can fit in the existing CCT footprint. In addition to UV disinfection eliminating chlorine solution, the need to add chemicals for dechlorination is also eliminated.

There are two configuration for UV systems. Option 1 is an open-channel which uses UV lamps mounted inside on a rack with flow level controls. This system offers lower capital costs, ease of maintenance, and no pressure loss. However, it requires more space, is vulnerable to debris, and UV lamps can degrade faster due to environmental exposure. Option 2 is a closed-vessel system. This system is compact, less susceptible to fouling, and provides more controlled disinfection, but it is more expensive to install and harder to maintain than the open-channel option. The option also potentially incurs more hydraulic loss due in comparison to an open channel system.

The three options above; expand the CCT, open channel UV, and closed vessel UV have been compared in a life cycle cost analysis, see Table 8-7.

**Table 8-7**
**20-Year Life Cycle Cost Analysis**

| Descriptions | Sodium Hypo-chlorite | TrojanUV Signa | Wedeco Duron | Evoqua ETS - UV | Nuvonic Proline | Wedeco LBX |
|---|---|---|---|---|---|---|
| **Type** | **Chemical** | **Open Channel** | | **Closed Vessel** | | |
| Capital Cost | $690,000 | $1,390,000 | $1,366,000 | $2,248,000 | $1,499,000 | $1,274,000 |
| Annual O&M, $ | $84,031 | $24,934 | $28,459 | $30,737 | $55,517 | $36,509 |
| Annual O&M 20 year present worth, @ 3% | $1,250,167 | $370,950 | $423,395 | $457,284 | $825,949 | $543,159 |
| Total 20-year Present Worth | $1,941,000 | $1,761,000 | $1,790,000 | $2,706,000 | $2,325,000 | $1,818,000 |

In general, Table 8-7 demonstrates that the UV systems have higher capital costs than expanding the CCT but based on the a 20-year life cycle cost both open-channel UV systems and one of the in-line closed vessel UV systems are the most cost efficient through the planning period.

### Disinfection Recommendations

An engineering report will be required for implementation but based on discussion with the City, there is another option the City should include in a life cycle cost analysis in the engineering report, peracetic acid (PAA).

PAA is a strong oxidant that has been growing in acceptance as a more potent, yet environmentally friendly, alternative to traditional disinfectants like chlorine gas and sodium hypochlorite. PAA has been approved by the United States Environmental Protection Agency (EPA) specifically as a wastewater

disinfectant. Because PAA is a stronger oxidant than chlorine, it requires a significantly lower dose and less contact time to achieve the same level of disinfection. Meaning the existing CCT volume is likely suitable.

However, to determine actual installation and chemical use, we would recommend testing. Additionally, material compatibility needs to be evaluated prior to testing as materials like PVC, ferrous steel, aluminum, and various gasketing types may need to be replaced and/or protected from exposure to PAA.

For planning purposes, based on the life cycle cost, UV disinfection will be incorporated into the capital improvements, but it is recommended that the City evaluate PAA while preparing the engineering report.

### 8.3.3 Screening

The City's existing Headworks contains an inclined auger type influent screen that was installed in 2014. The screen's design flow reaches capacity in 2041 as previously discussed. However, due to various operational issues combined with narrow influent channels, orientation, manufacturer location, and performance, the City is considering installation of a new Headworks screen sooner.

In review of the existing headworks configuration, it appears that a new screen and channel could be installed on the north side of the existing screen and channel. The layout can be such that the influent pump station still discharges to the upstream most existing gravel trap but then with the addition of gates, flow can be direct and isolated respectively to the new and existing screen channels. This configuration also facilitates full redundancy. Installation of a new concrete channel appears to have sufficient space between the existing return activated sludge yard piping on the north side and the existing structure, modifications will be needed, but for now it is assumed that the majority of that alignment will remain. Actual conflicts, if any, should be identified during detailed design.

Table 8-8 shows the opinion of probable costs for installing a new screen as described above.

**Table 8-8**
**Influent Screen Opinion of Probable Costs**

| Item Description | Unit Price | Qty | Unit | Total |
|---|---|---|---|---|
| New Screen | $80,000 | 1 | LS | $80,000 |
| Slide Gates | $15,000 | 2 | EA | $30,000 |
| Equipment installation (50% EQPT) | $47,500 | 1 | LS | $47,500 |
| Concrete | $1,200 | 6 | CY | $7,200 |
| RAS piping modifications | $5,000 | 1 | LS | $5,000 |
| Electrical and Controls | $45,000 | 1 | LS | $45,000 |
| | | | Subtotal | $214,700 |
| | | | Mobilization | $21,470 | $23,250 |
| | | | Subtotal | $236,170 |
| | | | Overhead, profit, bond, insurance, etc. | $35,426 | $38,363 |
| | | | Subtotal | $271,596 |
| | | | Contingency | $81,479 | $88,234 |
| | | | Subtotal | $353,074 |
| | | | Sales Tax | $31,071 | $33,646 |
| **OPINION OF PROBABLE CONSTRUCTION COST (OPCC)** | | | | **$385,000** |
| | | | | |
| | | | Engineering Design & Construction Services | 20% | $77,000.00 |
| | | | Administration | 2% | $7,700.00 |
| | | | Inspection/Permitting | 5% | $19,300.00 |
| | | | Owner's Contingency | 5% | $19,300.00 |
| **OPINION OF PROBABLE PROJECT COST (OPPC)** | | | | **$508,000.00** |

### Screen Recommendations

The proposed new screen project is not required until 2041 but based on existing screen performance would ideally be installed within the next 10 years. Therefore the recommendation is to include this project in the long-term planning capital improvements. The screen capacity should be sized for a minimum of 1.59 MGD but it is recommended 20-year projections be produced during detailed design and the screen be rated for that capacity.

## 8.4 Summary of Proposed Wastewater Treatment Upgrades

Table 8-9 summarizes the total OPPC and the City's share of the treatment plant upgrades as detailed and recommended above.

**Table 8-9**
**Summary of Proposed Wastewater Treatment Plant Upgrades**

| Year Required | Improvement | OPPC in 2025 Dollars | Everson's Share of Cost in 2025 Dollars[3] |
|---|---|---|---|
| 2028 | UV Disinfection | $1,390,000 | $927,000 |
| Near-term | WWTP Study | $250,000 | $167,000 |
| 2032 - 2036 | Headworks Screen | $508,000 | $339,000 |
| 2032 - 2045 | Coagulation/Flocculation Facility[1] | $522,000 | $348,000 |
| 2032 - 2045 | Effluent Filter[1] | $1,040,000 | $694,000 |
| 2032 - 2045 | Reclaimed Water System[1] | $1,518,000 | $1,012,000 |
| Early 2040's | WWTP Expansion Project[2] | $6.8 – 8.1 million | $4.4 – 5.4 million |
| | **Total OPPC** | $11.8 – 13.3 million | $7.9 – 8.9 million |

Notes:
1) Projects identified in the 2012 GSP Chapter 10 Wastewater Reuse. Costs herein are based on the 2012 GSP that have been corrected to 2025 dollars by applying an ENR construction cost indices specific to Seattle of reflect escalation from October 2011 to November 2025.
2) Based on the WWTP Expansion Project being comparable to the 2016 WWTP Upgrades project at an effective interest rate of 3.0 percent with a +/- 10% range.
3) WWTP costs are assumed to be shared with the City of Nooksack at a one-third Nooksack to two-thirds Everson cost split.

Figure 8-1 shows a conceptual layout of the improvements identified in Table 8-9 except for the WWTP Expansion Project as the extent of modifications and processes impacted will not be determined until the WWTP Study is completed.

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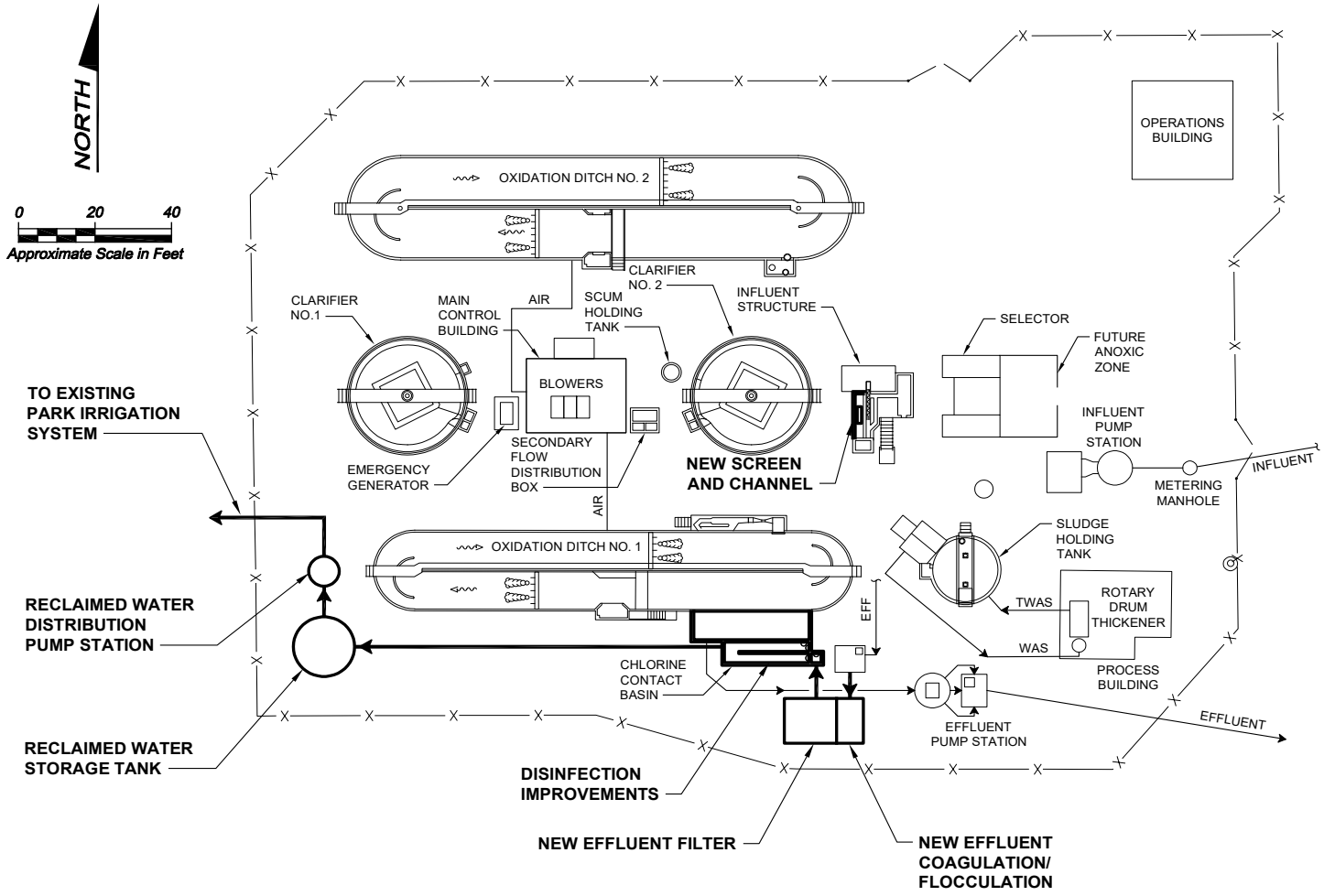


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**WWTP Proposed Upgrades**

General Sewer Plan
February 2026

**Figure 8-1**

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# Chapter 11 Financial

<The following replaces "Chapter 11 Financial" in the *2012 General Sewer Plan* (2012 GSP) in its entirety>

## 11.1 Agreement with City of Nooksack

The Cities of Everson and Nooksack entered into a restated agreement on July 22, 2014 that defined the financial responsibilities of each city in regards to the sewer systems and treatment facility. The Restated Agreement For Wastewater Treatment and Disposal is included as Appendix G.

## 11.2 Summary of Past Revenue and Expenses

The City of Everson funds the sewer system costs through monthly sewer rates and capital facilities charges. Table 11-1 summarizes the existing sewer rate structure.

**Table 11-1**
**2025 Sewer Rate Structure**

| | |
|---|---|
| **Unmetered Water Users (monthly):** | |
| Residential Structures: | |
| Single-family dwellings (includes manufactured housing) | $80.00 |
| Multiple-family dwellings (per dwelling unit) | $80.00 |
| Senior/disabled citizen discount | 10% |
| Commercial offices and businesses: | |
| Employees only restroom(s) | $80.00 |
| Public/customer restroom(s) (per restroom set) | $80.00 |
| Restaurants and Taverns | $80.00 |
| Service stations and garages | $80.00 |
| Laundromats | $320.00 |
| Churches | $80.00 |
| **Metered Water Users (all metered water users connected to the City sewage system):** | |
| Base rate per month per dwelling unit, business occupant or user for up to 600 cubic feet metered water usage per dwelling unit, business occupant or user, where the number of dwelling units, business occupants or users shall be determined by the City Clerk based on review of occupancy and business licensing information | $80.00 |
| Additional marginal rate per 100 cubic feet in excess of 600 cubic feet metered water usage per month per dwelling unit, business occupant or user; provided, that the additional marginal rate shall not be applicable to usage by residential customers during the months of June through August. | $2.00 |

The general facilities charges collected for new development connected to the sewer system are shown in Table 11-2.

**Table 11-2**
**Side Sewer Connection Fee**

| Consumer Category | Unit | Charge |
|---|---|---|
| Residential | Per Dwelling Unit | $6,400 |
| Commercial | Per Unit | $6,400 |

Table 11-3 provides a recent history summary of the income from sewer collection rates and general facilities connection charges, together with the associated annual expenses to operate the sewer utility area. Table 11-4 provides a summary of WWTP and sewer expenses by both Cities of Everson and Nooksack.

**Table 11-3**
**Summary of Past Sewer Revenue and Expenses**

| Financials | 2021 | 2022 | 2023 |
|---|---|---|---|
| Sewer Revenue | $1,393,073.15 | $1,544,665.80 | $1,649,561.91 |
| Sewer Expenditures | $966,964.21 | $1,013,167.88 | $1,117,768.83 |
| Net Revenue | $426,108.94 | $531,497.92 | $531,793.08 |

**Table 11-4**
**Sewer Expenses by City**

| Year | Everson | Nooksack | Total |
|---|---|---|---|
| 2021 | $966,964.21 | $379,835.43 | $1,346,799.64 |
| 2022 | $1,013,167.88 | $407,251.53 | $1,420,419.41 |
| 2023 | $1,117,768.83 | $434,363.95 | $1,552,132.78 |

## 11.3 Capital Improvement Program

Wastewater improvements regarding the collection system, treatment facilities, and implementing a reuse concept are described in Chapters 6, 8, and 10. These improvements are envisioned as being implemented over a series of years. The prioritization and phasing of CIP projects is developed based on a workshop held with the Everson City Council and discussion with the Department of Ecology (relative to the outfall). The wastewater capital improvement program (CIP) is organized into two parts:

- Immediate improvements to be initiated during the next six years from 2026 through 2031.
- Long range improvements will be implemented beyond 2031 on a flexible schedule as determined by the actual capacity needs of the sewer system.

Immediate improvements are summarized in Table 11-5 as annual expenditures with priorities defined to

meet immediate sewer system deficiencies while also attempting to create an approximate balance in annual expenditures. Not included in Table 11-5 but anticipated to occur in near term planning is the southwest mini-basin collection system as this will be developer funded. Long term improvements are summarized in Table 11-6.

In Table 11-5 and Table 11-6, the capital improvements opinion of probable costs that are to be shared with the City of Nooksack are noted. The costs shown are the City of Everson's portion of the total project costs.

## Table 11-5
## Capital Improvements – 2026 through 2031 in Thousands of 2025 Dollars

| Improvement | Year | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | |
| **Pump Station Capital Improvements** | | | | | | | |
| Annual PS (5, 6, 7, 10) Mechanical Replacement[2] | | $147 | $147 | $235 | $235 | $235 | $1,087 |
| **Pump Station Sub-Totals** | **$0** | **$147** | **$235** | **$235** | **$235** | **$235** | **$1,087** |
| **Collection System Piping Capital Improvements** | | | | | | | |
| PS 4 - Relocation Design[1] | $235 | | | | | | $235 |
| PS 4 - Relocation Construction[1][5] | | $92 | $92 | $92 | $92 | $92 | $462 |
| Mini Basin 6 Sewer Improvements Design | $279 | $93 | | | | | $372 |
| Mini-Basin 6 Sewer Improvements Construction | | $115 | $115 | $115 | $115 | $115 | $577 |
| **Collection System Piping Subtotal** | **$514** | **$301** | **$208** | **$208** | **$208** | **$208** | **$1,646** |
| **Pump Station and Piping Sub-Total** | **$514** | **$448** | **$443** | **$443** | **$443** | **$443** | **$2,733** |
| **Wastewater Treatment Plant Capital Improvements** | | | | | | | |
| UV Disinfection Design[3][4] | | $226 | | | | | $226 |
| UV Disinfection Construction[3][5] | | | $57 | $57 | $57 | $57 | $227 |
| WWTP Study[6] | | | | | | $167 | $167 |
| **WWTP Subtotal** | **$0** | **$226** | **$57** | **$57** | **$57** | **$224** | **$619** |
| **Sewer System Totals** | **$514** | **$673** | **$500** | **$500** | **$500** | **$667** | **$3,352** |
| **Escalated Totals** | **$529** | **$714** | **$546** | **$562** | **$579** | **$796** | |

Notes:
1) Costs are assumed to be shared with the City of Nooksack at a two-thirds Nooksack to one-third Everson cost split.
2) Order of pump stations to be determined by Everson; multiple can be done in a year as desired or needed. Additionally, PS 10 is mechanical replacement except pumps and is shown in 2028 but shift as desired or needed.
3) The UV Disinfection costs are assumed to be shared with the City of Nooksack at a one-third Nooksack to two-thirds Everson cost split.
4) It is assumed that the UV Disinfection design would occur a year earlier than construction to account for funding applications.
5) Costs assume a twenty-year funding loan repayment with a 2.0% interest rate.

Capital costs will change over time from the 2025 values shown in Table 11-5. The Construction Cost Index published by the Engineering News Record has historically shown costs increases for Seattle has been about 3 percent annually. The last line in Table 11-5 projects the CIP cost for future years based on an annual increase of 3 percent. A summary per year of the non-escalated costs of the capital improvements in 2025 dollars is presented graphically in Figure 11-1.

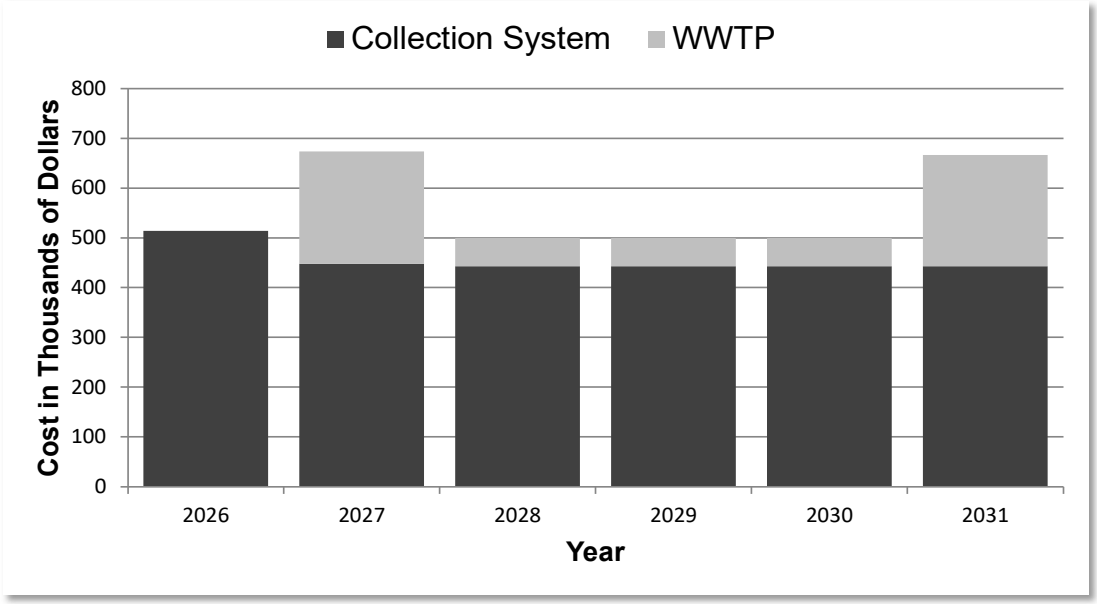


**Figure 11-1 Capital Improvements – 2026 through 2031**

Some wastewater capital improvements have been identified that will be required after 2031 and the completion of the six-year CIP shown in Table 11-5. Precise dates for the longer-term improvements cannot be established now, though the approximate dates for capital improvements in 2032 and beyond are included in the summary provided in Table 11-6.

**Table 11-6**
**Long-Term Capital Improvements OPPC[1]**

| Improvement | 2032 through 2045 |
|---|---|
| **Pump Station Capital Improvements** | |
| Flow Meter Installation Program[2] | $999,000 |
| PS 11 Mechanical replacement/upgrade | $235,000 |
| PS 13 Upgrade Pumps | $40,000 |
| **Pump Station Sub-Totals** | **$1,274,000** |
| **Pump Station Sub-Totals** | **$1,274,000** |
| **Collection System Piping Capital Improvements** | |
| Flow Monitoring Study[3] | $40,000 |
| **Collection System Piping Subtotal** | **$40,000** |
| **Pump Station and Piping Sub-Total** | **$1,314,000** |
| **Wastewater Treatment Plant Improvements[3]** | |
| Headworks New Screen | $339,000 |
| Coagulation/Flocculation Facility[4] | $348,000 |
| Effluent Filter[4] | $693,000 |
| Reclaimed Water Storage and Distribution System[4] | $1,012,000 |
| WWTP Expansion Project | $4.4 to 5.4 million |
| **WWTP Subtotal** | **$6.8 to 7.8 million** |
| **Sewer System Totals** | **$8.1 to 9.1 million** |

Notes:
1) Opinion of probably project costs (OPPS) in 2025 dollars.
2) Costs assumes nine existing pump stations have meters installed and PS 4 costs are split with Nooksack.
3) The costs shown represent the City of Everson's portion of the total project costs shared with the City of Nooksack.
4) Projects identified in the 2012 GSP Chapter 10 Wastewater Reuse. Costs herein are based on the 2012 GSP that have been corrected to 2025 dollars by applying an ENR construction cost indices specific to Seattle of reflect escalation from October 2011 to November 2025.

## 11.4 Available Funding Assistance and Financing Resources

Feasible long-term capital funding strategies over the 20-year planning period must be defined to ensure that adequate resources are available to fund the CIP identified herein. In addition to the utility's resources, such as accumulated cash reserves, capital revenues, and rate revenues designated for capital purposes, capital needs can be met from outside sources such as grants, low-interest loans and bond financing. The following is a summary of the City's sewer utility resources and outside resources.

## UTILITY RESOURCES

Connection Charges: A connection charge, such as the utility connection fee and capital facility charge, refer to a one-time charge imposed on new customers as a condition of connecting to the sewer system. The purpose of the connection charge is to promote equity between new and existing customers and to provide a source of revenue to fund capital projects. Revenue can only be used to fund utility capital projects or to pay debt service incurred to finance those projects

Local Facilities Funds: While a connection charge is the way new customers pay their share of general facilities costs, local facilities funds are used to pay the costs of local facilities that connect each property to the system's infrastructure. Local facilities funding is often overlooked in a rate forecast because it is funded upfront by either connecting customers, developers, or through an assessment to properties, but never from rates. Although these funding mechanisms do not provide a capital revenue source toward funding CIP costs in this analysis, the discussion of these charges is included in this chapter, as they represent a potential funding source for future projects. None of the mechanisms described below are currently identified as part of the current financial plan but may be considered in the future.

A number of mechanisms can be considered for funding local facilities. One of the following scenarios typically occurs: (a) the utility charges a connection fee based on the cost of the local facilities under the same authority as the connection charge; (b) a developer funds extension of the system to its development and turns those facilities over to the utility (contributed capital); or (c) a local assessment is set up called a Utility Local Improvement District, which collects tax revenue from benefited properties.

A local facilities charge is a variation of the connection charge authorized through RCW 35.92.025. It is a City-imposed charge to recover the cost related to service extension to local properties. Often called a front-footage charge and imposed based on footage of main "fronting" a particular property, it is usually implemented as a reimbursement mechanism to a city for the cost of a local facility that directly serves a property. It is a form of connection charge and thus can accumulate up to 10 years of interest. It typically applies to instances when no developer-installed facilities are needed through developer extension due to the prior existence of available mains already serving the developing property.

The developer extension is a requirement that a developer install on-site and sometimes off-site improvements as a condition of extending service. These are in addition to the required connection charge and must be built to City standards, like local facility connections. Part of the agreements between the City and the developer for the developer to extend service might include a latecomer agreement, resulting in a latecomer charge to new connections to the developer extension. Latecomer charges are a variation of developer extensions whereby new customers connecting to a developer-installed improvement make a payment to the City based on their share of the developer's cost. The City passes this charge on to the developer who installed the facilities. This is part of the developer extension process and defines the allocation of costs and records latecomer obligations on the title of affected properties. No interest is allowed, and the reimbursement agreement cannot exceed 20 years in duration. Latecomer agreements may also be applied for City funded projects of a public utility improvement(s). Either approach results in compensation provided by property owners benefiting from the improvements who do not contribute to the original cost of construction and is authorized through RCW 35.91 municipal water and sewer facilities act.

Utility Local Improvement District formation is another mechanism for funding infrastructure that assesses benefited properties based on the special benefit received by the construction of specific facilities. Most

often used for local facilities, some Utility Local Improvement Districts also recover related general facilities costs. Substantial legal and procedural requirements can make this a relatively expensive process and there are mechanisms by which a Utility Local Improvement District can be rejected.

**OUTSDIE RESOURCES**

This section outlines various grant and loan opportunities available to the City through federal and state agencies and bond financing options to fund the CIP identified in this Plan. The short-term capital program identified in this plan does not depend on any of these funding sources, but they may be pursued in the future to help fund the long-term capital program.

Grants and Low Cost Loans: Historically, federal and state grant programs were available to local utilities for capital funding assistance. However, these assistance programs have been mostly eliminated, substantially reduced in scope and amount or replaced by loan programs. Remaining miscellaneous grant programs are generally lightly funded and heavily subscribed. However, even the benefit of low-interest loans makes the effort of applying worthwhile. Grants and low-cost loans for Washington State utilities are available from the Washington State Department of Ecology (Ecology) and the Department of Community, Trade and Economic Development. Each department offers programs for which the City might be eligible. They are primarily targeted as sewer programs or low-income and/or rural communities.

- Department of Ecology: Ecology's Water Quality Program administers funding programs that provide low-interest loans, grants or loan and grant combinations for projects that protect, preserve and enhance water quality in Washington State. Low-interest loans and forgivable principal loan funding are available through the Clean Water State Revolving Fund. Grants are available for financially distressed communities through the Centennial Clean Water Program.
- Department of Community, Trade and Economic Development: The Department of Community, Trade and Economic Development has three grant and loan programs for which the City might eligible. These programs are:
    - The Community Development Block Grants General Purpose Grant;
    - The Community Economic Revitalization Board (CERB) Grant and Loan Program;
    - The Public Works Trust Fund (PWTF) Loan Program.

Community Economic Revitalization Board: CERB primarily offers low-cost loans. Grants are made available only to the extent that a loan is not reasonably possible. The CERB targets public facilities funding for economically disadvantaged communities, specifically targeting job creation and retention. Priority criteria include the unemployment rates, number of jobs created and/or retained, wage rates, projected private investment and estimated state and local revenues generated by the project. Traditional construction projects are offered at a maximum dollar limit per project of $2.0 million. A local match of 50 percent is targeted.

- Eligible applicants include cities, towns, port districts, special purpose districts, federally recognized Indian tribes, and municipal corporations.
- Public facilities, bridges, roads, domestic and industrial water, earth stabilization, sanitary sewer, storm sewer, railroad, telecommunications, electricity, transportation, natural gas, buildings or structures and port facilities are all eligible.

Terms do not exceed 20 years, including available payment deferral of interest and principal for up to 5 years. Interest rates typically vary between 1.00-3.00 percent based on debt service coverage ratio, distressed County and length of loan term.

Public Works Trust Fund: Cities, counties, special purpose districts, public utility districts, and quasi-municipal governments are eligible to receive loans from the PWTF. Eligible projects include preconstruction, repair, replacement, and construction of infrastructure for domestic water, wastewater, stormwater, solid waste, road, and bridge projects that improve public health and safety, respond to environmental issues, promote economic development, or upgrade system performance.

PWTF loans are available at interest rates ranging typically between1.0 to 2.0 percent depending on the repayment term, with reduced interest rates available for all projects located in communities that have been declared a natural disaster. The standard loan offer is repaid over a 20-year term. All loan terms are subject to negotiation and Board approval. Currently, no local match is required, and the maximum loan amount is $10M per jurisdiction per biennium. Pre-construction projects are limited to a $1 million maximum.

**BOND FINANCING**

General Obligation Bonds: General obligation bonds are bonds secured by the full faith and credit of the issuing agency, committing all available tax and revenue resources to debt repayments. With this high level of commitment, general obligation bonds have relatively low interest rates and few financial restrictions. However, the authority to issue general obligation bonds is restricted in terms of the amount and use of the funds, as prescribed in RCW 39.36.020. While bonding capacity can limit availability of general obligation bonds for utility purposes, these can sometimes play a valuable role in project financing. A rate savings may be realized through two avenues: the lower interest rate and related bond costs, and the extension of repayment obligation to all tax-paying properties (not just developed properties) through the authorization of an ad valorem property tax levy.

Revenue Bonds: Revenue bonds are commonly used to fund utility capital improvements. The debt is secured by the revenue of the issuing utility, and the debt obligation does not extend to the City's other revenue sources. With this limited commitment, revenue bonds typically bear higher interest rates than general obligation bonds and require security conditions related to the maintenance of dedicated reserves (a bond reserve) and financial performance (added bond debt service coverage). The City agrees to satisfy these requirements by ordinance as a condition of bond sale. Revenue bonds can be issued in Washington State without a public vote. There is no bonding limit, except perhaps the practical limit of the utility's ability to generate sufficient revenue to repay the debt and provide coverage. In some cases, poor credit or lack of reserves might make issuing bonds problematic.

## 11.5 Projected Future Operating Budget

Projecting the annual increase in operating expenses for the sewer system forward to 2031 is assumed to increase approximately 5 percent annually as shown in Table 11-7. Sewer service charges increases have not been shared with BHC and so the current rates are used as placeholders for projected revenue. The rate per dwelling is shown in Table 11-7, along with projected expenditure, debt obligation, CIP costs, and the net revenue. The net revenue is based on the rate per sewer customers and current new connection charge of $6,400.

### Table 11-7
### Projected Net Revenue

| Projection | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|
| Dwellings | 1164 | 1191 | 1218 | 1244 | 1271 | 1298 |
| Rate | $80 | $80 | $80 | $80 | $80 | $80 |
| Revenue | $1,264,480 | $1,290,240 | $1,316,000 | $1,341,760 | $1,367,520 | $1,393,280 |
| Expenditures | ($962,609) | ($1,010,739) | ($1,061,276) | ($1,114,340) | ($1,170,057) | ($1,228,560) |
| Debt Obligation(1) | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) |
| CIP(2) | ($529,420) | ($714,408) | ($545,820) | ($562,195) | ($579,061) | ($795,839) |
| **Net Revenue** | **($428,645)** | **($636,003)** | **($492,192)** | **($535,871)** | **($582,694)** | **($832,215)** |
| **Cumulative Net Revenue** | **($428,645)** | **($1,064,648)** | **($1,556,841)** | **($2,092,711)** | **($2,675,405)** | **($3,507,620)** |

Notes:
1) Only includes the existing debt obligation for the WWTP Upgrades.
2) Based on escalated totals in Table 11-5.

Based on revenues, expenditures, debt and CIP shown in Table 11-7, the 6 year CIP is not fully funded. There appears to be a shortfall of approximately $3.5 Million in funding over the 6-year CIP. The CIP already assumed some loans would be acquired but it appears the City likely needs to perform a sewer rate study if capital reserves are insufficient. An example balancing the six-year CIP through rates and connection fees was evaluated. The following is one possible approach to balance the budget based on the projections and capital improvements, but it is recommended that the City perform a rate study to explore all options.

- Connection charges increased; preliminary numbers evaluated increasing connection fees from $6,400 to $8,000.
- Apply a latecomer's fee to new dischargers that discharge in and upstream of Mini-Basin 6. Preliminary numbers estimate 405 new parcels, including 77 in the UGA, but based on a 2028 construction, only new dischargers starting 2029 would incur the latecomers fee but the improvement can be accelerated. However, business flows are not evaluated separately; only total flow on a per capita basis so the number of connections is likely higher. Latecomers fee assumes construction and professional services during construction costs in 2028 dollars are recovered. It is up to the City what would be included if this approach were taken. Escalated at 3 percent annually, the result is a latecomer's fee of approximately $6,460. Accelerating this project slightly reduces annual rate increase and latecomers fee per connection.
- Institute an annual approximately 8.5 percent increase through 2031 to the sewer rates.

The changes above will balance the budget over the six year period, but will require carrying a significant amount of debt into the long-term planning period that is dependent on continued development. Again, this assumes the City chooses not to use the capital reserves and instead procures loans either as municipal bonds, or in combination with outside funding (e.g., State Revolving Fund loans, Public Works Trust Fund loans, etc.). Additionally, due to flooding impacts on the City as well as economic growth there is potential to receive grants through FEMA or Department of Commerce programs respectively, which could offset rate or connection fee increases. The projected net revenue including the $8,000 connection charge, $6,460 latecomers fee, and the 8.5 percent annual rate increase through 2031 is presented in Table 11-8.

**Table 11-8**
**Projected Net Revenue With Rate & Fee Adjustments**

| Adjusted Projection | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|
| Dwellings | 1164 | 1191 | 1218 | 1244 | 1271 | 1298 |
| Rate | $87 | $94 | $102 | $111 | $120 | $130 |
| Revenue | $1,426,870 | $1,560,182 | $1,707,395 | $2,004,360 | $2,183,715 | $2,381,599 |
| Expenditures | ($962,609) | ($1,010,739) | ($1,061,276) | ($1,114,340) | ($1,170,057) | ($1,228,560) |
| Debt Obligation[1] | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) | ($201,096) |
| CIP[2] | ($529,420) | ($714,408) | ($545,820) | ($562,195) | ($579,061) | ($579,061) |
| **Net Revenue** | **($266,254)** | **($366,062)** | **($100,797)** | **$126,729** | **$233,502** | **$372,883** |
| **Cumulative Net Revenue** | **($266,254)** | **($632,316)** | **($733,114)** | **($606,385)** | **($372,883)** | **($0)** |

Notes:
1) Only includes the existing debt obligation for the WWTP Upgrades.
2) Based on escalated totals in Table 11-5.

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# APPENDICES

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# Appendix A

# SEPA Checklist

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# SEPA[1] Environmental Checklist

## Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

## Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

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.

## Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

## Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

[1] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

## A.Background

Find help answering background questions[2]

1. **Name of proposed project, if applicable:**

   Adoption of the City of Everson General Sewer Plan (GSP) Amendments

2. **Name of applicant:**

   City of Everson

3. **Address and phone number of applicant and contact person:**

   City of Everson Public Works

   c/o Dave Schoonover

   PO Box 315

   Everson WA, 98247

   (360) 966-3411

4. **Date checklist prepared:**

   February, 2025

5. **Agency requesting checklist:**

   City of Everson

   Washington Department of Ecology

6. **Proposed timing of schedule (including phasing, if applicable):**

   The GSP Amendments identified future facilities required to accommodate the wastewater demand of the City and the Urban Growth Area for the next 20 years, with recommendations for specific improvements between 2026 and 2031 and other improvements that may be needed after 2017. The environmental review does not include assessment of impacts for implementation projects.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   The GSP includes both immediate capital improvement needs to be implemented between 2026 and 2031 and long-term improvements anticipated to be needed after 2031. These improvements will be subjected to environmental review prior to construction.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   City of Everson Comprehensive Land Use Plan 2025.

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.**

[2] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

The City of Nooksack is also in the process of adopting is GSP Amendments. The City of Nooksack GSP affects this GSP because all the sanitary sewer produced within the City of Nooksack is transmitted to the Everson Wastewater Treatment Plant (WWTP) for treatment and diposal.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    Washington State Department of Ecology 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 proposal includes 6-year and long-term capital facility needs to ensure adequate sanitary sewer service is available to serve the anticipated growth of the City within the planning period. The GSP includes:

    - Projection of population and related residential sewer demand through the year 2045.
    - Analysis of current and projected capacity of the WWTP.
    - Analysis of current and projected capacity of the wastewater collection system in the City and the Urban Growth Areas (UGA).
    - Estimate of facility needs, related projects, and their opinion of probably costs.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a 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.**

    The GSP covers the City of Everson and its designated UGA. The figures are attached to the end of the document.

# B.Environmental Elements

## 1. Earth

Find help answering earth questions[3]

**a. General description of the site:**

Everson is located in the Nooksack River Valley.

[3] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

**Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:**

**b. What is the steepest slope on the site (approximate percent slope)?**

Slopes vary. The steepest slopes are about 5 percent based on USDA soils maps. There are isolated places along creek gullies and the Nooksack River with steeper slopes.

**c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

Soil within the City reflect the river bottom land characteristics of alluvial deposits. Most of the land in the Nooksack Valley is classified as prime farmland by the US Natural Resource Conservation Service.

**d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No.

**e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

To be determined at project level review.

**f. Could erosion occur because of clearing, construction, or use? If so, generally describe.**

To be determined at project level review.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

To be determined at project level review.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**

All construction will be designed to comply with adopted City Standards for erosion and sedimentation control; as well as the latest edition of the Washington State Department of Ecology Storm Water Management Manual for Western Washington.

## 2. Air

Find help answering air questions[4]

**a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.**

[4] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air

To be determined at project level review.

**b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

None known.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

To be determined at project level review.

## 3. Water

Find help answering water questions[5]

### a. Surface:

Find help answering surface water questions[6]

**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.**

The Nooksack River and Johnson Creek flow through the City. There are several wetlands throughout the City. There are a few manmade irrigation ponds and ditches.

**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.**

All work over, in , or adjacent to the described water will be determined at project level review.

**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. Indicate the source of fill material.**

To be determined at project level review.

**4. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

To be determined at project level review.

**5. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Portions of the planning area are located in the 100-year floodplain. Pump Stations 6, 7, 8, and 9 have been identified for minor improvements (i.e. flow meters,

[5] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water
[6] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

mechanical replacement) for the planning period and are in the 100-year floodplain. Additionally the East Main Street Collector that serves basin 4 and the City of Nooksack is in the 100-year floodplain and regulated floodway which has been identified for improvements. Pump Station 4 is in the regulated floodway. The preferred alternative to capacity deficiencies in this area is to relocate pump station 4 which is discussed in the GSP but include demolition of the existing pump station and the installation of a new force main and gravity mains in the floodplain.

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.**

   Discharge of treated effluent to receiving waters (Nooksack River) will increase as growth does from 2025 to 2045 but the current WWTP national pollutant discharge elimination permit (NPDES) is not projected to exceed current discharge regulations through the planning period. Current permitted monthly discharge limits for flow, 5-day biological oxygen demand (BOD), and total suspended solids (TSS) is 0.661 million gallons per day of flow, 165 pounds per day BOD, and165 pounds per day TSS. Fecal coliforms bacteria are limited to 28/100 milliler (mL) monthly geometric mean and total residual chrlone at 0.1 milligrams per liter (mg/L).

**b. Ground:**

Find help answering ground water questions[7]

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

   Temporary groundwater dewatering will likely be necessary for the construction of some of the Capital Improvement Projects related to WWTP improvements, pump stations and piping. The quantities are unknown and will be approximated during the project phase. Discharge to groundwater is not anticipated.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). 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.**

   No waste material will be discharged into the ground.

**c. Water Runoff (including stormwater):**

1. **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

[7] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

To be determined at project level review.

2. **Could waste materials enter ground or surface waters? If so, generally describe.**

   To be determined at project level review.

3. **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

   To be determined at project level review.

d. **Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

## 4. Plants

Find help answering plants questions

a. **Check the types of vegetation found on the site:**

☒ **deciduous tree: alder, maple, aspen, other**

☒ **evergreen tree: fir, cedar, pine, other**

☒ **shrubs**

☒ **grass**

☒ **pasture**

☒ **crop or grain**

☒ **orchards, vineyards, or other permanent crops.**

☒ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☒ **water plants: water lily, eelgrass, milfoil, other**

☒ **other types of vegetation**

b. **What kind and amount of vegetation will be removed or altered?**

To be determined at project level review.

c. **List threatened and endangered species known to be on or near the site.**

According to the US Department of Fish and Wildlife, Ute ladies'-tresses (Spiranthes diluvialis) may be found in the area, however, no known plants have been identified. It is listed as threatened.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.**

To be determined at project level review.

e. **List all noxious weeds and invasive species known to be on or near the site.**

To be determined at project level review.

## 5. Animals

Find help answering animal questions[8]

**a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.**

birds: hawks, eagles, grouse, quail, pheasants, killdeer, gulls, doves, owls, hummingbirds, flickers, woodpeckers, kingfishers, phoebes, larks, swallows, martins, jays, ravens, crows, chickadees, bushtits, wrens, robins, thrushes, kinlets, pipits, waxwings, starlings, warblers, meadowlarks, and migratory wildfowl.

mammals: opossums, shrews, moles, bats, rabbits, beaver, gophers, skunks, woodrats, voles, mice, weasels, coyotes, foxes, deer, and domestic animals.

fish: salmon, trout, and other non-threatened or endangered species.

**b. List any threatened and endangered species known to be on or near the site.**

Chinook bull trout, and steelhead are present in the Nooksack River. Bald eagles are in the planning area.

**c. Is the site part of a migration route? If so, explain.**

The planning area is part of the Pacific Flyway

**d. Proposed measures to preserve or enhance wildlife, if any.**

To be determined at project level review.

**e. List any invasive animal species known to be on or near the site.**

To be determined at project level review.

## 6. Energy and natural resources

Find help answering energy and natural resource questions[9]

**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.**

To be determined at project level review but only kind of energies anticipated are electric for powering installed equipment as well as electric and/or natural gas generators for emergency power.

**b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

[8] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals
[9] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.**

To be determined at project level review.

## 7. Environmental health

Health Find help with answering environmental health questions[10]

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.**

No.

1. **Describe any known or possible contamination at the site from present or past uses.**

   None anticipated.

2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

   None anticipated.

3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

   The only chemicals to be used and stored during the operating life of the planned projects is system-wide emergency generator's fuel and the WWTP's disinfection chemicals; none will be produced. Fuel will be used as well as potentially stored onsite in double containment vessels for construction equipment. Spill prevention plans will be required for all construction projects.

4. **Describe special emergency services that might be required.**

   None anticipated.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   To be determined at project level review.

### b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   To be determined at project level review.

[10] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health

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)?**

   To be determined at project level review.

3. **Proposed measures to reduce or control noise impacts, if any:**

   Design and construction will comply with local adopted noise regulations.

## 8. Land and shoreline use

Find help answering land and shoreline use questions[11]

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

   Residential, commercial, industrial, agriculture, open space, and recreation. There are no effects currently identified for current land uses on nearby and adjacent properties but this will be determined at project level review.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

   No.

   1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

      No.

c. **Describe any structures on the site.**

   Building and other structures associated with the land uses listed above.

d. **Will any structures be demolished? If so, what?**

   To be determined at project level review but non anticipated.

e. **What is the current zoning classification of the site?**

   Agricultural, commercial, light industrial, multi-use, public, residential, residential-7500, and recreational open space. Area of the UGA are designated according to Whatcom County rural classifications to be changed to City designations when annexed.

f. **What is the current comprehensive plan designation of the site?**

[11] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

Agricultural, commercial, light industrial, multi-use, public, residential, residential-7500, and recreational open space. The Everson UGA as urban growth area on the Whatcom County comprehensive plan designation mapping.

**g. If applicable, what is the current shoreline master program designation of the site?**

Area within Everson include Urban, Rural and Conservancy shoreline designations.

**h. Has any part of the site been classified as a critical area by the city or county? If so, specify.**

Yes, the City has identified and mapped wetlands, aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife conservation areas in accordance with the Growth Management Act.

**i. Approximately how many people would reside or work in the completed project?**

The 2025 Whatcom County Comprehensive Plan projects the 2045 resident population will be 4,579.

**j. Approximately how many people would the completed project displace?**

To be determined at project level review but the anticipation is none.

**k. Proposed measures to avoid or reduce displacement impacts, if any.**

To be determined at project level review.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.**

To be determined at project level review.

**m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

To be determined at project level review.

## 9. Housing

Find help answering housing questions[12]

**a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

Not applicable.

**b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

To be determined at project level review but the anticipation is none.

**c. Proposed measures to reduce or control housing impacts, if any:**

To be determined at project level review.

[12] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing

## 10. Aesthetics

Find help answering aesthetics questions[13]

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

   To be determined at project level review.

b. **What views in the immediate vicinity would be altered or obstructed?**

   To be determined at project level review.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

   To be determined at project level review.

## 11. Light and glare

Find help answering light and glare questions[14]

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

   To be determined at project level review.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

   To be determined at project level review.

c. **What existing off-site sources of light or glare may affect your proposal?**

   None known.

d. **Proposed measures to reduce or control light and glare impacts, if any:**

   To be determined at project level review.

## 12. Recreation

Find help answering recreation questions

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

The Nooksack River, Riverside Park and the Everson City Park are all located within the study area.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

To be determined at project level review.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

[13] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics
[14] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

To be determined at project level review.

## 13. Historic and cultural preservation

Find help answering historic and cultural preservation questions[15]

**a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

None known at this time, to be determined during project level review.

**b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

To be determined at project level review.

**c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

For projects that disturb soils, preliminary site investigations will include a cultural resources assessment of the project area.

**d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

To be determined at project level review.

## 14. Transportation

Find help with answering transportation questions[16]

**a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

State Highway 544, State Highway 9 and local roads serve the City and UGA.

**b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

Everson is served by the Whatcom Transit Authority.

**c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

[15] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p
[16] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

To be determined at project level review.

**d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

To be determined at project level review but some projects likely to occur within the immediate vicinity of the Nooksack River and/or Johnson Creek.

**e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

None.

**f. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

No.

**g. Proposed measures to reduce or control transportation impacts, if any:**

None.

## 15. Public services

Find help answering public service questions[17]

**a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

No.

**b. Proposed measures to reduce or control direct impacts on public services, if any.**

None.

## 16. Utilities

Find help answering utilities questions[18]

**a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:**

Most utilities are available in the planning area, although not completely throughout, particularly in the UGAs. There are approximately 12 private septic systems in the City.

**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.**

To be determined during project level review.

[17] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services
[18] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities

## C.Signature

Find help about who should sign[19]

**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.**

X _____

**Type name of signee:**

**Position and agency/organization**:

**Date submitted**:

## D.Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet[20]

**Do not** use this section 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 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?**

   Increased sanitary sewer collection and treatment would result in increased discharges of treated effluent to the receiving water of the Nooksack River but not beyond the most recent receiving water analysis performed for the WWTP outfall that was relocated in 2015 until approximately 2041 when flows are projected to reach NPDES limits. Prior to this a new mixing zone evaluation will be conducted as well as an engineering report and plans and specifications for any planned improvements.

   - **Proposed measures to avoid or reduce such increases are:**

     All improvement projects recommended in the GSP will be subject to federal, sate, and local regulations and standards requiring mitigation of these impacts.

[19] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

[20] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

   Projects recommended by the GSP are not expected to affect plants, animals, fish, or marine life.

   - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

     Proposed measures to protect, or conserve plans, animals, fish, or marine life will be determined at project level review.

3. **How would the proposal be likely to deplete energy or natural resources?**

Very nominal depletion of energy or natural resources may result from recommended project.

- **Proposed measures to protect or conserve energy and natural resources are:**

  To be determined at project level review.

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?**

To be determined at project level review

- **Proposed measures to protect such resources or to avoid or reduce impacts are:**

  To be determined at project level review

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?**

To be determined at project level review

- **Proposed measures to avoid or reduce shoreline and land use impacts are:**

  To be determined at project level review

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

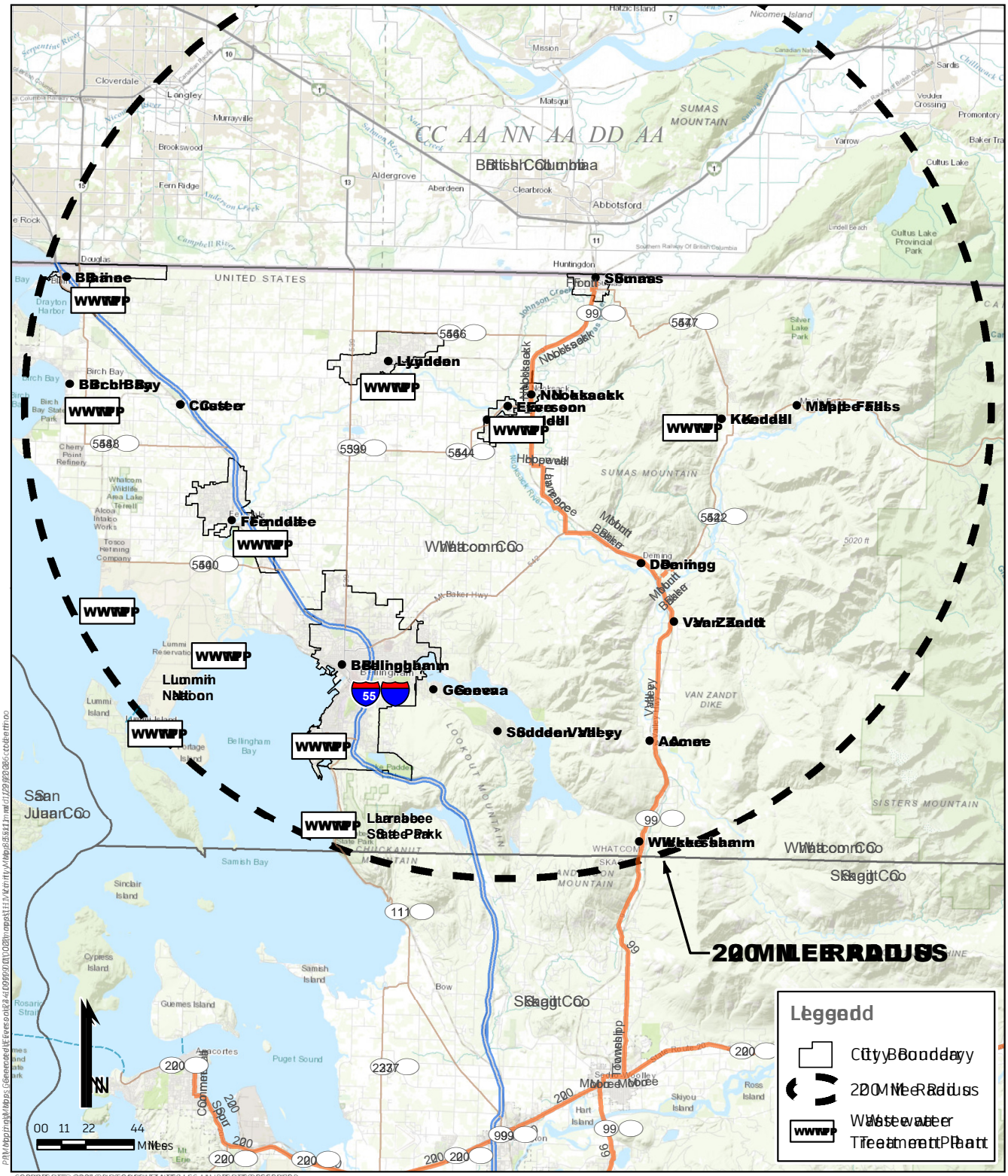
To be determined at project level review

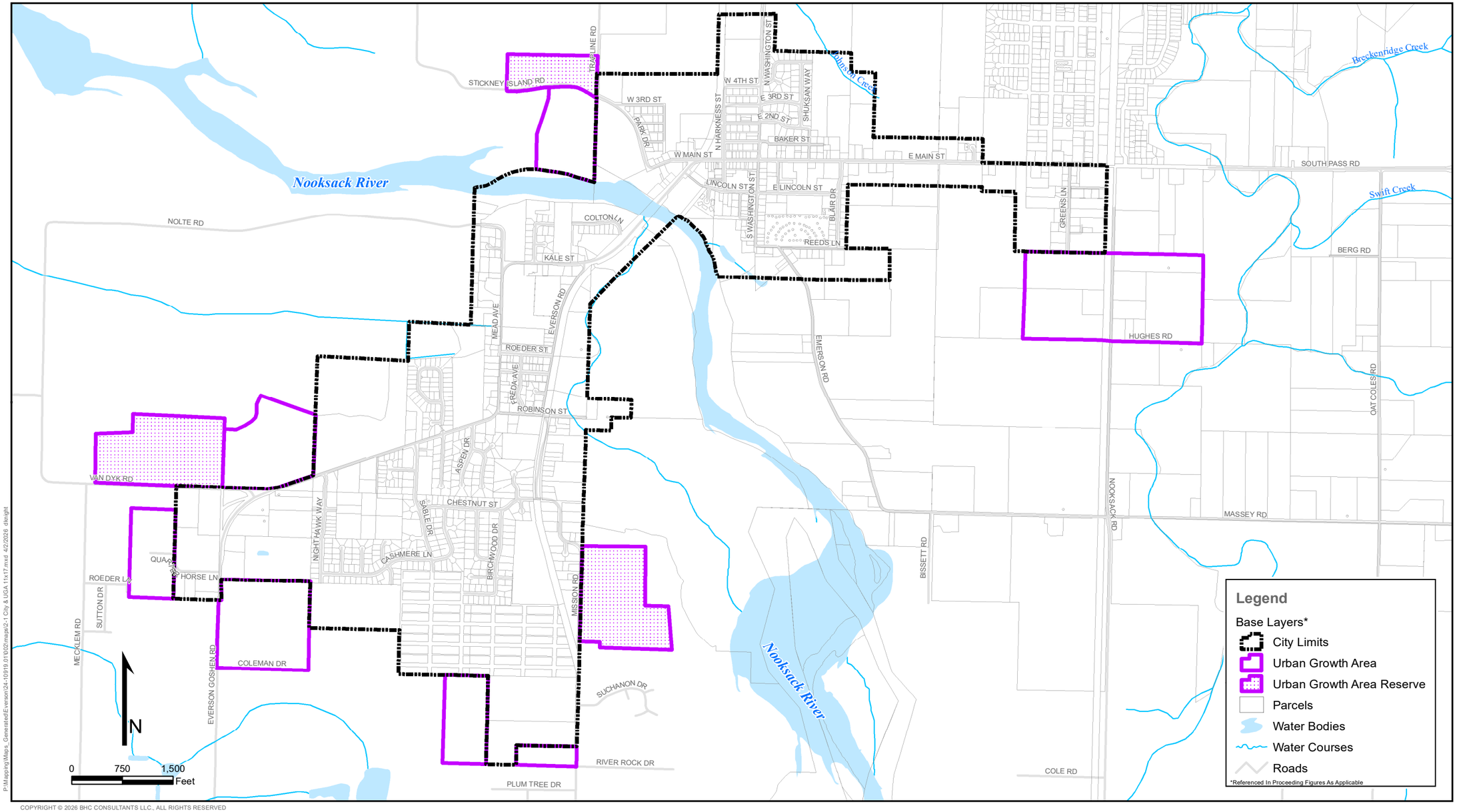
- **Proposed measures to reduce or respond to such demand(s) are:**

  To be determined at project level review

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

The GSP is written to comply with applicable federal, state, and local regulations.


Legend
City Boundary
200 Meter Radius
Wastewater Treatment Plant
200 METER RADIUS
UNITED STATES
Bellingham
Everson
Nooksack
Lynden
Ferndale
Blaine
Birch Bay
Custer
Sumas
Deming
Kendall
Maple Falls
Van Zandt
Acme
Wickersham
Lummi Nation
Whatcom Co
Skagit Co
San Juan Co
SUMAS MOUNTAIN
LOOKOUT MOUNTAIN
CHUCKANUT MOUNTAIN
SISTERS MOUNTAIN
Samish Bay
Bellingham Bay
Lake Padden
Puget Sound
Guemes Island
Sinclair Island
Cypress Island
Samish Island
Anacortes
Mount Baker Highway
Nooksack River
Lawrence
Johnson Creek
Cherry Point Refinery
Alcoa Intalco Works
Tosco Refining Company
Lummi Island
Portage Island
Hart Island
Ross Island
Skyou Island
Silver Lake Park
Cultus Lake Provincial Park
Vedder Crossing
Promontory
Yarrow
Baker Trail
Lindell Beach
Huntingdon
Abbotsford
Clearbrook
Aldergrove
Aberdeen
Fern Ridge
Matsqui
Mission
Hatzic Island
Nicomen Island
Sardis
Cloverdale
Langley
Murrayville
Brookswood
Douglas
Drayton Harbor
Birch Bay State Park
Lummi Reservation
Deming
Maple Falls
Kendall
Van Zandt
Acme
Wickersham
Lummi Nation
Bellingham
Custer
Sumas
Lynden
Nooksack
Everson
Ferndale
Blaine
Birch Bay
Whatcom Co
Skagit Co
San Juan Co
5566
5577
5588
5599
5544
5522
5500
99
5
11
237
200
00 11 22 44
Miles
Vicinity Map
General Sewer Plan
City of Everson, Washington
February 2006
Figure
1111
bhc CONSULTANTS
city of everson






GIS Data: City of Everson & Whatcom County.
Data sources supplied may not reflect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

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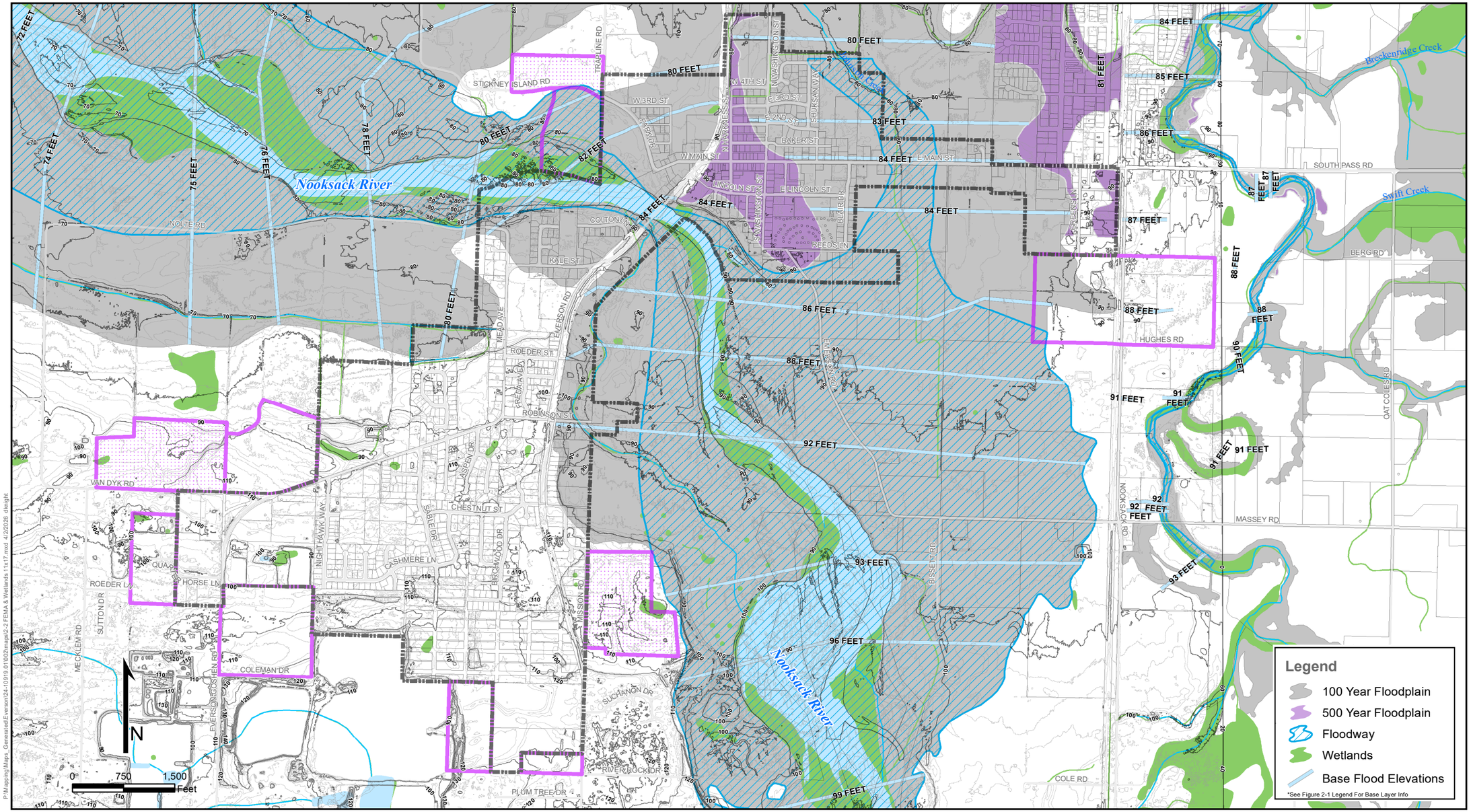
city of everson

## City and UGA Boundaries

General Sewer Plan
City of Everson, Washington
February 2026

Figure **2-1**






GIS Data: Flood: FEMA. Wetlands: National Wetland Inventory
Data sources supplied may not reflect current or actual conditions. This map is a geographic representation based on information available. It does not represent survey data. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

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## FEMA Floodplain and Wetlands

General Sewer Plan
City of Everson, Washington
February 2026

Figure 2-2

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# Appendix B

## Discharge Monitoring Report (DMR)

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City of Everson
Consolidated Discharge Monitoring Report (DMR) for the Everson WWTP
Permit Number: WA0020435

| | | INFLUENT | | | | | EFFLUENT |
|---|---|---|---|---|---|---|---|
| Year | Month | Flow (Mgd) | BOD 5-Day (lbs/day) | BOD mg/L | TSS (lbs/day) | TSS mg/L | Flow (Mgd) |
| 2020 | January | 0.44 | 737 | 200 | 669 | 182 | 0.49 |
| | February | 0.42 | 647 | 185 | 767 | 219 | 0.44 |
| | March | 0.31 | 721 | 275 | 699 | 267 | 0.31 |
| | April | 0.29 | 681 | 283 | 731 | 304 | 0.28 |
| | May | 0.28 | 660 | 284 | 375 | 161 | 0.27 |
| | June | 0.29 | 725 | 296 | 308 | 126 | 0.29 |
| | July | 0.27 | 666 | 299 | 756 | 339 | 0.20 |
| | August | 0.25 | 534 | 260 | 749 | 364 | 0.19 |
| | September | 0.24 | 704 | 346 | 797 | 392 | 0.19 |
| | October | 0.25 | 722 | 340 | 937 | 441 | 0.20 |
| | November | 0.33 | 685 | 252 | 690 | 253 | 0.27 |
| | December | 0.39 | 474 | 145 | 520 | 159 | 0.33 |
| | **Average Annual** | **0.314** | **663** | 253 | **667** | 255 | **0.288** |
| | **Maximum Month** | **0.442** | **737** | 200 | **937** | 254 | **0.485** |
| | **Peak Day** | **0.875** | **1,131** | - | **1,227** | - | **0.906** |
| 2021 | January | 0.40 | 471 | 140 | 532 | 158 | 0.33 |
| | February | 0.39 | 555 | 169 | 525 | 160 | 0.33 |
| | March | 0.29 | 569 | 233 | 703 | 287 | 0.26 |
| | April | 0.27 | 538 | 237 | 604 | 266 | 0.24 |
| | May | 0.26 | 549 | 253 | 653 | 301 | 0.26 |
| | June | 0.25 | 556 | 262 | 587 | 276 | 0.25 |
| | July | 0.24 | 634 | 310 | 607 | 297 | 0.22 |
| | August | 0.24 | 598 | 298 | 588 | 293 | 0.22 |
| | September | 0.24 | 617 | 307 | 608 | 303 | 0.22 |
| | October | 0.27 | 579 | 259 | 584 | 261 | 0.25 |
| | November | 0.47 | 694 | 178 | 734 | 188 | 0.49 |
| | December | 0.44 | 588 | 161 | 614 | 168 | 0.49 |
| | **Average** | **0.315** | **579** | 221 | **611** | 233 | **0.296** |
| | **Max Month** | **0.467** | **694** | 178 | **734** | 188 | **0.492** |
| | **Peak Day** | **1.042** | **913** | - | **1,649** | - | **1.060** |
| 2022 | January | 0.44 | 644 | 177 | 721 | 198 | 0.48 |
| | February | 0.32 | 596 | 225 | 512 | 193 | 0.30 |
| | March | 0.35 | 630 | 218 | 547 | 190 | 0.32 |
| | April | 0.29 | 666 | 275 | 553 | 228 | 0.27 |
| | May | 0.29 | 616 | 259 | 585 | 246 | 0.26 |
| | June | 0.31 | 574 | 218 | 566 | 216 | 0.29 |
| | July | 0.26 | 571 | 266 | 595 | 277 | 0.23 |
| | August | 0.24 | 508 | 249 | 632 | 310 | 0.23 |
| | September | 0.24 | 579 | 288 | 542 | 269 | 0.23 |
| | October | 0.24 | 681 | 337 | 580 | 287 | 0.23 |
| | November | 0.26 | 648 | 294 | 524 | 237 | 0.25 |
| | December | 0.33 | 638 | 230 | 562 | 202 | 0.34 |
| | **Average** | **0.298** | **613** | 253 | **577** | 238 | **0.286** |
| | **Max Month** | **0.436** | **681** | 337 | **721** | 310 | **0.479** |
| | **Peak Day** | **0.848** | **1,066** | - | **1,164** | - | **0.917** |
| 2023 | January | 0.35 | 674 | 233 | 798 | 277 | 0.35 |
| | February | 0.30 | 586 | 235 | 595 | 238 | 0.30 |
| | March | 0.28 | 616 | 267 | 554 | 240 | 0.29 |
| | April | 0.27 | 592 | 263 | 621 | 276 | 0.25 |
| | May | 0.26 | 588 | 267 | 674 | 306 | 0.24 |
| | June | 0.24 | 642 | 318 | 939 | 466 | 0.22 |
| | July | 0.24 | 580 | 294 | 788 | 399 | 0.21 |
| | August | 0.23 | 574 | 296 | 768 | 396 | 0.22 |
| | September | 0.23 | 645 | 329 | 725 | 371 | 0.22 |
| | October | 0.24 | 613 | 306 | 697 | 348 | 0.23 |
| | November | 0.28 | 618 | 268 | 721 | 312 | 0.27 |
| | December | 0.36 | 651 | 216 | 592 | 197 | 0.35 |
| | **Average** | **0.273** | **615** | 274 | **706** | 319 | **0.262** |
| | **Max Month** | **0.361** | **674** | 329 | **939** | 466 | **0.349** |
| | **Peak Day** | **0.511** | **991** | - | **1,579** | - | **0.501** |

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# Appendix D

# Hydraulic Model

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**City of Everson**
**General Sewer Plan**
**2023 Everson Sewer Flows Per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

T:\Projects\Everson, City of\2023 Gen Engineering Services\Task 003 - GSP amendment\4) Flows\Model\[Sewer-Model_Jan 2026.xls]N - Model

**People per Dwelling (PPD) = 2.84** *(it is assumed that the PPD stays constant throughout the planning horizon)*

**Gallons per Capita per Day (GPCD) = 63.7** *from Flows and Loads Calculations performed by BHC, avg '21-'32*

| Year | Population[2] | Peaking Factor[1] |
|---|---|---|
| 2024 | 3,227 | 3.42 |

Notes:

(1) Peaking factors from Figure C-1 in the Department of Ecology "Criteria for Sewer Works Design"

(2) Population from State of Washington Office of Financial Management, 2024 City Estimate Worksheet

| 2024 Mini-Basin Flows | | | |
|---|---|---|---|
| Basin | Existing Dwellings[1] | Ave Daily Flow (gpm) | Peak Hour Flow (gpm) |
| **4** | 51 | 6 | 22 |
| **5** | 187 | 23 | 80 |
| **6[2]** | 408 | 53 | 181 |
| **7** | 40 | 5 | 17 |
| **8** | 116 | 15 | 50 |
| **9** | 31 | 4 | 13 |
| **10** | 124 | 16 | 53 |
| **11** | 53 | 7 | 23 |
| **13** | 82 | 10 | 35 |
| **T** | 45 | 6 | 19 |
| **Totals** | **1137** | **145** | **494** |

Notes:

(1) Existing dwellings determined from City of Everson Sewer Account Data.

(2) Mini-Basin 6 includes the Everson Elementary School

**City of Everson**
**General Sewer Plan**
**Future Flows per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

T:\Projects\Everson, City of\2023 Gen Engineering Services\Task 003 - GSP amendment\4) Flows\Model\[Sewer-Model_Jan 2026.xls]N - Model

**People per Dwelling (PPD) = 2.84** *(it is assumed that the PPD stays constant throughout the planning horizon)*

**Gallons per capita per day (GPCD) = 63.7** *from Flows and Loads Calculations performed by BHC*

| Year | Population | Peaking Factor[1] |
|---|---|---|
| 2024[2] | 3,227 | 3.42 |
| 2031[3] | 3,624 | 3.37 |
| 2045[4] | 4,579 | 3.28 |

Notes:
(1) Peaking factors from Figure C-1 in the Department of Ecology "Criteria for Sewer Works Design".
(2) Population from State of Washington Office of Financial Management, 2024 City Estimate Worksheet.
(3) Population projection for 2031 is from the City's Land Use Plan and the 2024 Whatcom County Comprehensive Plan, distributed within the current City limits.
(4) Population projection for 2045 is from the City's Land Use Plan and the 2024 Whatcom County Comprehensive Plan, distributed within the UGA areas.

**City of Everson 2031 Mini-Basin Flows**

| Mini-Basin | 2024 Existing Dwellings | Available Parcels[1] | Newly Allocated Parcels | Total Allocated Parcels[2] | Additional Mini-Basin Flow (gpm) | Total Mini-Basin Flow[3] (gpm) | Total Mini-Basin Peak Hour Flow[4] (gpm) |
|---|---|---|---|---|---|---|---|
| **4** | 51 | 17 | 10 | 61 | 1 | 8 | 26 |
| **5** | 187 | 0 | 0 | 187 | 0 | 23 | 79 |
| **6**[6] | 408 | 12 | 7 | 415 | 1 | 54 | 183 |
| **7** | 40 | 0 | 0 | 40 | 0 | 5 | 17 |
| **8** | 116 | 23 | 14 | 130 | 2 | 16 | 55 |
| **9** | 31 | 0 | 0 | 31 | 0 | 4 | 13 |
| **10** | 124 | 36 | 22 | 146 | 3 | 18 | 62 |
| **11** | 53 | 49 | 30 | 83 | 4 | 10 | 35 |
| **13** | 82 | 15 | 9 | 91 | 1 | 11 | 39 |
| **T** | 45 | 28 | 17 | 62 | 2 | 8 | 26 |
| **SW Dev** | 0 | 50 | 30 | 30 | 4 | 4 | 13 |
| **UGA** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **1137** | **230** | **139** | **1276** | **17** | **162** | **547** |
| | | **Required New Dwellings[5] =** | 140 | | | | |
| | | **Unallocated in 2031 =** | 90 | | | | |

**City of Everson**
**General Sewer Plan**
**Future Flows per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

T:\Projects\Everson, City of\2023 Gen Engineering Services\Task 003 - GSP amendment\4) Flows\Model\[Sewer-Model_Jan 2026.xls]N - Model

**People per Dwelling (PPD) = 2.84** *(it is assumed that the PPD stays constant throughout the planning horizon)*

**Gallons per capita per day (GPCD) = 63.7** *from Flows and Loads Calculations performed by BHC*

| Year | Population | Peaking Factor(1) |
|---|---|---|
| 2024(2) | 3,227 | 3.42 |
| 2031(3) | 3,624 | 3.37 |
| 2045(4) | 4,579 | 3.28 |

Notes:
(1) Peaking factors from Figure C-1 in the Department of Ecology "Criteria for Sewer Works Design".
(2) Population from State of Washington Office of Financial Management, 2024 City Estimate Worksheet.

| City of Everson 2045 Mini-Basin Flows | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mini-Basin | 2032 Existing Dwellings | Available Parcels(7) | Newly Allocated Parcels | Allocated Parcels(2) | Additional Mini-Basin Flow (gpm) | Total Mini-Basin Flow(3) (gpm) | Total Mini-Basin Peak Hour Flow(4) (gpm) |
| **4** | 61 | 20 | 20 | 81 | 3 | 10 | 34 |
| **5** | 187 | 0 | 0 | 187 | 0 | 23 | 79 |
| **6(6)** | 415 | 14 | 14 | 429 | 2 | 57 | 191 |
| **7** | 40 | 0 | 0 | 40 | 0 | 5 | 17 |
| **8** | 130 | 27 | 27 | 157 | 3 | 20 | 67 |
| **9** | 31 | 0 | 0 | 31 | 0 | 4 | 13 |
| **10** | 146 | 43 | 43 | 189 | 5 | 24 | 80 |
| **11** | 83 | 58 | 58 | 141 | 7 | 18 | 60 |
| **13** | 91 | 4 | 4 | 95 | 1 | 12 | 40 |
| **T** | 62 | 34 | 34 | 96 | 4 | 12 | 41 |
| **SW-Dev** | 70 | 60 | 60 | 130 | 8 | 16 | 55 |
| **UGA** | 0 | 77 | 77 | 77 | 10 | 10 | 33 |
| **Totals** | **1316** | **337** | **337** | **1653** | **42** | **210** | **709** |
| | | **Required New Dwellings(5) =** | 336 | | | | |
| | | **Unallocated in 2045 =** | 1 | | | | |
| | | | 76 | 216.7538639 | | | |

**Notes:**
(1) Available Parcels are an estimate of parcels in the community available for building based on aerial photography and assuming 0.25 acres/parcel where parcels are not defined.
(2) Allocated parcels are existing residences per basin plus available parcels occupied by new residences.
(3) Total mini-basin flow is calculated by multiplying 86 gallons per capita per day by 3.02 PPD times the allocated parcels.
(4) Peak hour flow is the average daily flow multiplied by the peak hour factor determined using Figure C1-1 from the DOE "Criteria for Sewer Works Design".
(5) Required new dwellings based on population projections divided by 2.76 people per dwelling.
(6) Mini-Basin 6 includes the Everson Elementary School
(7) Available parcels are based on 2031 available parcels not allocated plus an estimate of parcels in the community available for building based on aerial photography and assuming 75% of an area is develc

**City of Everson**
**General Sewer Plan**
**Everson Collection System Hydraulic Model**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**

**Feb-26**

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0.0028 4.48
0.004 6.4

**Manning's n =** 0.013

| Everson Collection System Hydraulic Model | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Location** | **Existing Pipe Capacity** | | | | | | | **Current & Future Peak Hour Flows (gpm)[2]** | | | |
| | **Dia (in)** | **$R_h$** | **Slope** | **Pipe Area ($ft^2$)** | **$Q_{hydraulic}$ (cfs)** | **$Q_{hydraulic}$ (gpm)** | **$Q_{design}$ (gpm)[1]** | **Q (2024)** | **Q (2031)** | **Q (2045)** | **Basin** |
| **Flowing into LS-4 (Interceptor)** | 8 | 0.1667 | 0.003 | 0.3491 | 0.6615 | 297 | 258 | 316 | 383 | 494 | 4 |
| **Flowing into LS-5 (Jim & Dave's)** | 8 | 0.1667 | 0.003 | 0.3491 | 0.6615 | 297 | 258 | 94 | 92 | 92 | 5 |
| **Flowing to LS-6 (Bridge)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 292 | 344 | 514 | 6 |
| **Flowing to LS-7 (Lincoln Street)** | 8 | 0.1667 | 0.003 | 0.3491 | 0.6615 | 297 | 258 | 160 | 164 | 176 | 7 |
| **Flowing into LS-8 (Reed's Lane)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 50 | 55 | 67 | 8 |
| **Flowing into LS-9 (Evergreen)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 13 | 13 | 13 | 9 |
| **Flowing to LS-10 (Robinson Street)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 53 | 62 | 80 | 10 |
| **Flowing to LS-11 (Maple Ridge)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 23 | 35 | 60 | 11 |
| **Flowing to LS-13 (Hawks)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 35 | 51 | 128 | 13 |
| **SW-Dev (new pipe)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 0 | 13 | 55 | 15 |
| **UGA** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 0 | 0 | 33 | |
| **Basin T (Gravity)** | 8 | 0.1667 | 0.004 | 0.3491 | 0.7638 | 343 | 298 | 180 | 191 | 216 | T |
| **Flowing from mixing MH to WWTP LS** | 15 | 0.3125 | 0.003 | 1.2272 | 3.5368 | 1587 | 1381 | 788 | 918 | 1224 | T |

2024 2031 2045

**Notes:**

(1) 87% of full flow is at 80% depth.

(2) Model does not account for flow attenuation, and is therefore a conservative estimate of the actual flows.

**City of Nooksack**
**General Sewer Plan**
**2023 Nooksack Sewer Flows Per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

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**People per Dwelling (PPD) = 2.53** *From State of Washington Office of Financial Management, 2011 City Estimate Worksheet*
*(it is assumed that the PPD stays constant throughout the planning horizon)*

**Gallons per Capita per Day (GPCD) = 67.8** *from Flows and Loads Calculations performed by BHC, avg '21-'32*

| Year | Population | Peaking Factor(1) |
|---|---|---|
| 2024 | 1,608 | 3.66 |

Notes:
(1) Peaking factors from Figure C-1 in the Department of Ecology "Criteria for Sewer Works Design"

| 2024 Mini-Basin Flows | | | | |
|---|---|---|---|---|
| Basin | Existing Dwellings(1) | Avg Daily Flow (gpm) | Peak Hour Flow (gpm) | |
| 1A | 87 | 10 | 38 | |
| 1B | 61 | 7 | 27 | |
| 1C | 95 | 11 | 41 | |
| 2A | 94 | 11 | 41 | |
| 2B | 136 | 16 | 59 | |
| 14 | 62 | 7 | 27 | |
| 3 | 45 | 5 | 20 | |
| 12 | 50 | 6 | 22 | |
| 15 | 0 | 0 | 0 | a.k.a EAST basin |
| E | 6 | 5 | 20 | |
| Total | 636 | 80 | 294 | |

Notes:
(1) Existing residences determined from State of Washington, Office of Financial Management, 2011 City Estimate Worksheet and rooftop survey.
(2) Basin E includes the Nooksack Valley Middle School.

**City of Nooksack**
**General Sewer Plan**
**Future Flows per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

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**People per Dwelling (PPD) =** **2.53** *From State of Washington Office of Financial Management, 2011 City Estimate Worksheet (it is assumed that the PPD stays constant throughout the planning horizon)*

**Gallons per Capita per Day (GPCD) =** **67.8** *from Flows and Loads Calculations performed by BHC*

| Year | Population | Peaking Factor[(1)] |
|---|---|---|
| 2024 | 1,608 | 3.66 |
| 2031 | 1,880 | 3.61 |
| 2045 | 2,568 | 3.50 |

**Notes:**
(1) Peaking factors from Figure C-1 in the Department of Ecology "Criteria for Sewer Works Design"

**City of Nooksack 2031 Mini-Basin Flows**

| Mini-Basin | 2023 Existing Dwellings | Available Parcels[(1)] | Newly Allocated Parcels | Total Allocated Parcels[(2)] | Additional Mini-Basin Flow (gpm) | Total Mini-Basin Flow[(3)] (gpm) | Total Mini-Basin Peak Hour Flow[(4)] (gpm) |
|---|---|---|---|---|---|---|---|
| **1A** | 87 | 0 | 0 | 87 | 0 | 10 | 37 |
| **1B** | 61 | 0 | 0 | 61 | 0 | 7 | 26 |
| **1C** | 95 | 0 | 0 | 95 | 0 | 11 | 41 |
| **2A** | 94 | 0 | 0 | 94 | 0 | 11 | 40 |
| **2B** | 136 | 88 | 66 | 202 | 8 | 24 | 87 |
| **14** | 62 | 0 | 0 | 62 | 0 | 7 | 27 |
| **3** | 45 | 29 | 29 | 74 | 3 | 9 | 32 |
| **12** | 50 | 0 | 0 | 50 | 0 | 6 | 21 |
| **WM** | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| **EAST[(6)]** | 6 | 45 | 34 | 40 | 4 | 10 | 37 |
| **UGA-N** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **UGA-SW** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **636** | **162** | **129** | **765** | **15** | **99** | **358** |
| | | **Required New Dwellings[(5)] =** | 108 | | | | |
| | | **Unallocated in 2031 =** | 33 | | | | |

**City of Nooksack**
**General Sewer Plan**
**Future Flows per Mini-Basin**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

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| City of Nooksack 2045 Mini-Basin Flows | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Mini-Basin** | **2032 Existing Dwellings** | **Available Parcels[1]** | **Newly Allocated Parcels** | **Allocated Parcels[2]** | **Additional Mini-Basin Flow (gpm)** | **Total Mini-Basin Flow[3] (gpm)** | **Total Mini-Basin Peak Hour Flow[4] (gpm)** |
| **1A** | 87 | 0 | 0 | 87 | 0 | 10 | 36 |
| **1B** | 61 | 0 | 0 | 61 | 0 | 7 | 25 |
| **1C** | 95 | 0 | 0 | 95 | 0 | 11 | 40 |
| **2A** | 94 | 0 | 0 | 94 | 0 | 11 | 39 |
| **2B** | 202 | 22 | 13 | 215 | 2 | 26 | 90 |
| **14** | 62 | 0 | 0 | 62 | 0 | 7 | 26 |
| **3** | 74 | 90 | 89 | 163 | 11 | 19 | 68 |
| **12** | 50 | 0 | 0 | 50 | 0 | 6 | 21 |
| **WM** | 0 | 0 | 0 | 0 | 0 | 3 | 12 |
| **EAST(6)** | 40 | 116 | 101 | 141 | 12 | 24 | 83 |
| **UGA-N** | 0 | 22 | 22 | 22 | 3 | 3 | 9 |
| **UGA-SW** | 0 | 25 | 25 | 25 | 3 | 3 | 10 |
| **Totals** | **765** | **275** | **250** | **1015** | **30** | **131** | **459** |
| | | **Required New Dwellings[5] =** | 272 | | | 0.189 | 0.662 |
| | | **Unallocated in 2045 =** | 3 | | | | |

| | | |
|---|---|---|
| | 47 | 118.8301887 |

**Notes:**

(1) Available Parcels are an estimate of parcels in the community available for building based on aerial photography.

(2) Allocated parcels are existing residences per basin plus available parcels occupied by new residences.

(3) Total mini-basin flow is calculated by multiplying 56 gallons per capita per day by 3.08 PPD times the allocated parcels.

(4) Peak hour flow is the average daily flow multiplied by the peak hour factor determined using Figure C1-1 from the DOE "Criteria for Sewer Works Design".

(5) Required new dwellings based on population projections divided by 3.08 people per dwelling.

(6) Basin E includes Nooksack Valley Middle School.

(7) UGA includes Nooksack Elementary School.

**City of Nooksack**
**General Sewer Plan**
**Nooksack Collection System Hydraulic Model**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**

**Feb-26**

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**Manning's n = 0.013**

2023 2031 2045

| Nooksack Collection System Hydraulic Model | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Existing Pipe Capacity | | | | | | | Current & Future Peak Hour Flows (gpm)[2] | | | |
| | Dia (in) | $R_h$ | Slope | Pipe Area ($ft^2$) | $Q_{hydraulic}$ (cfs) | $Q_{hydrualic}$ (gpm) | $Q_{design}$ (gpm)[1] | Q (2023) | Q (2031) | Q (2045) | Basin |
| Flowing From South into LS-1 (Garfield) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 60 | 60 | 60 | 1A |
| Flowing From North into LS-1 (Garfield) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 173 | 249 | 342 | 1B |
| Flowing from East into LS-1 (Garfield) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 41 | 41 | 41 | 1C |
| Into LS-1 | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 274 | 349 | 442 | |
| Flowing from West into LS-2 (Park) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 61 | 72 | 116 | 2A |
| Flowing From East into LS-2 (Park) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 86 | 150 | 200 | 2B |
| Flowing from LS-14 (Whispering) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 27 | 27 | 27 | 14 |
| Flowing South into LS-3 (North PS) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 20 | 32 | 77 | 3 |
| Flowing into LS-12 (W 3rd) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 22 | 22 | 22 | 12 |
| Flowing from East into LS-15 (East) | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 0 | 37 | 83 | EAST |
| UGA North | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 0 | 0 | 9 | |
| UGA South | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 0 | 0 | 10 | |
| E Columbia St Main Collector | 8 | 0.1667 | 0.004 | 0.3491 | 0.764 | 343 | 298 | 294 | 358 | 459 | |

**Notes:**
(1) 87% of full flow is at 80% depth.
(2) Model does not account for flow attenuation, and is therefore a conservative estimate of the actual flows.

**Cities of Everson and Nooksack**
**General Sewer Plan**
**Pumps**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

T:\Projects\Everson, City of\2023 Gen Engineering Services\Task 003 - GSP amendment\4) Flows\Model\[Sewer-Model_Jan 2026.xls]N - Model

1400 5.6
560 2.24
560 1.344

| City of Everson | | | | | Flows, gpm | | | $Velocity_{CAP}$ |
|---|---|---|---|---|---|---|---|---|
| **Lift Station** | **Capacity (gpm)** | **Force Main Dia (in)** | **Force Main Length (ft)** | **Discharge Velocity (ft/s)** | **2023** | **2031** | **2045** | **ft/s** |
| **4 - Interceptor** | 500 | 6 | 3,570 | 5.67 | 316 | 383 | 494 | 5.67 |
| **5 - Jim & Dave's** | 225 | 8 | Lift Station | 1.44 | 94 | 92 | 92 | 1.44 |
| **6 - Bridge** | 720 | 6 | 1,438 | 8.17 | 292 | 344 | 514 | 8.17 |
| **7 - Lincoln** | 325 | 8 | 299 | 2.07 | 160 | 164 | 176 | 2.07 |
| **8 - Reed's** | 60 | 8 | Lift Station | 0.38 | 50 | 55 | 67 | 0.42 |
| **9 - Evergreen** | 60 | 4 | 659 | 1.53 | 13 | 13 | 13 | 1.53 |
| **10 - Robinson** | 350 | 6 | 60 | 3.97 | 53 | 62 | 80 | 3.97 |
| **11 - Maple Ridge** | 60 | 4 | 1,132 | 1.53 | 23 | 35 | 59.7 | 1.53 |
| **13 - Hawks** | **100** | **4** | 680 | 2.55 | 35 | 51 | 128 | 3.27 |
| **X - SW Dev** | **???** | **4** | **??** | #VALUE! | 0 | 13 | 55 | 1.41 |

| City of Nooksack | | | | | Flows, gpm | | | $Velocity_{CAP}$ |
|---|---|---|---|---|---|---|---|---|
| **Lift Station** | **Capacity (gpm)** | **Force Main Dia (in)** | **Force Main Length (ft)** | **Discharge Velocity (ft/s)** | **2023** | **2031** | **2045** | **ft/s** |
| **1 - Garfield** | 310 | 6 | 2,165 | 3.52 | 274 | 349 | 442 | 5.02 |
| **2 - Park** | 210 | 4.22 | 872 | 4.82 | 147 | 223 | 316 | 7.25 |
| **3 - North** | 150 | 4 | 1,383 | 3.83 | 20 | 32 | 77 | 3.83 |
| **12 - W 3rd** | 60 | 4 | Lift Station | 1.53 | 22 | 22 | 22 | 1.53 |
| **14 - Whispering Meadows** | 100 | 4 | 1,424 | 2.55 | 27 | 27 | 27 | 2.55 |
| **15 - E Dev** | **100** | 4 | **XXXX** | 2.55 | 0 | 37 | 83 | 2.55 |

| City of Everson Wastewater Treatment Plant | | | | | Flows, gpm | | | $Velocity_{CAP}$ |
|---|---|---|---|---|---|---|---|---|
| **Lift Station** | **Capacity (gpm)** | **Force Main Dia (in)** | **Force Main Length (ft)** | **Discharge Velocity (ft/s)** | **2023** | **2031** | **2045** | **ft/s** |
| **Influent Pump Station** | 1100 | 8 | Lift Station | 7.02 | 788 | 918 | 1224 | 7.81 |
| **Effluent Pump Station** | 1050 | 8 | Lift Station | 6.70 | 788 | 918 | 1224 | 7.81 |

**City of Nooksack**
**General Sewer Plan**
**School Flows**
**Prepared by: M. Michalak**
**Reviewed by: K. Gray**
**Feb-26**

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Elementary School Flow per Staff & Student (GPCD) = 10 GPCD per DOE "Criteria for Sewage Design" TABLE G2-2 Design Basis for New Sewage Works

Middle School Flow per Staff & Student (GPCD) = 16 GPCD per DOE "Criteria for Sewage Design" TABLE G2-2 Design Basis for New Sewage Works

| Schools Contribution to Flow | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Year** | **Population** | **Change** | **Nooksack Valley Middle School Staff & Students** | **Nooksack Elementary School Staff & Students** | **Everson Elementary School Staff & Students** | **Nooksack Valley Middle School Ave Day Flow (gpm)** | **Nooksack Elementary Ave Day Flow (gpm)** | **Everson Elementary School Ave Day Flow (gpm)** |
| | | | | | | | | |
| **2021** | 4,450 | 0.96 | 394 | 307 | 239 | 4.38 | 2.13 | 1.66 |
| **2022** | 4,620 | 0.97 | 409 | 318 | 248 | 4.54 | 2.21 | 1.72 |
| **2023** | 4,744 | 0.00 | 420 | 327 | 255 | 4.67 | 2.27 | 1.77 |
| **2031** | 5,504 | 1.16 | 487 | 379 | 296 | 5.41 | 2.63 | 2.05 |
| **2045** | 7,147 | 1.30 | 633 | 493 | 384 | 7.03 | 3.42 | 2.67 |

# Appendix G

# Agreement

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# RESTATED AGREEMENT FOR WASTEWATER TREATMENT AND DISPOSAL

**THIS RESTATED AGREEMENT FOR WASTEWATER TREATMENT AND DISPOSAL** (the "Agreement") is entered into this 22nd day of July, 2014, by and between the CITY OF EVERSON, WASHINGTON (hereinafter called "Everson") and the CITY OF NOOKSACK, WASHINGTON (hereinafter called "Nooksack"), each a noncharter code city under the laws of the State of Washington.

## I. RECITALS

**WHEREAS**, the Cities of Everson and Nooksack have each developed a sewer comprehensive plan for providing municipal sewage collection and treatment services for the health and welfare of their citizens;

**WHEREAS**, to the extent feasible and reasonable, Everson and Nooksack desire to operate their respective sewage systems on a cooperative basis under the terms provided in this Agreement, as the same may hereafter be amended;

**WHEREAS**, Everson owns and operates and maintains a sewage collection system ("Everson system"), and a sewage treatment and disposal facility ("Everson Facility") located in the City of Everson, and Nooksack owns and operates a sewage collection system ("Nooksack system") through which it delivers municipal sewage to the City of Everson;

**WHEREAS**, Everson and Nooksack previously agreed to provide for the expansion and improvement of Everson's sewage treatment facility assuring certain capacity is reserved for Nooksack in said system, and to develop collection systems for each City for delivery of sewage to the Everson Facility, and to provide for the continued operation and maintenance as it reflects each party's reserved capacity in the Everson Facility, including the payment of rates and charges to be paid to Everson by Nooksack for the maintenance and operation of the Everson owned facilities and for the treatment of wastewater delivered by Nooksack to the Everson Interceptor, defined below, for treatment at the Everson Facility pursuant to this Agreement;

**WHEREAS**, Nooksack, in accordance with the terms herein, will connect with and utilize the Everson Facility for the purpose of treatment and disposal of wastewater generated by Nooksack;

**WHEREAS**, Nooksack is familiar with the capacities and limitations of the Everson Facility, and will ensure, in accordance with this Agreement, that only Acceptable Wastewater, as defined herein, flows into the Everson Facility for treatment and disposal;

**WHEREAS**, in consideration of the past capital investments in the System made by Nooksack, Everson, in accordance with the terms and conditions herein, is willing to continue to accept, treat and dispose of acceptable wastewater from Nooksack and is willing to continue to reserve a portion of the Everson Facility's capacity for the benefit of Nooksack, according to the terms and conditions herein, and the parties mutually agree that Nooksack has the clear right to said reserved capacity;

**WHEREAS**, Nooksack is willing to compensate Everson at appropriate rates and charges for accepting wastewater based upon the type of wastewater for which treatment is

sought and based upon its Allocated Capacity, defined below, and/or its treated wastewater, if any, generated by Nooksack;

**WHEREAS**, Nooksack and Everson are authorized by RCW 39.34.080 to enter into interlocal cooperation agreements for the cooperative undertaking and administration of projects within their respective powers; and

**WHEREAS**, Nooksack and Everson have previously executed an Agreement for Wastewater Treatment and Disposal dated September 25, 1984, and a Restatement and Amendment of the Agreement for Wastewater Treatment and Disposal dated September 23, 1987, which the parties hereto agree is in need of amendment and restatement.

**NOW, THEREFORE**, the parties hereto mutually agree to the following:

## II. DEFINITIONS

1. "Acceptable Sewage" and "Acceptable Wastewater" means sewage meeting then applicable local, state and federal quality criteria as may be required under applicable permits, including but not limited to the City of Everson NPDES Waste Discharge Permit No. WA0020435, for such discharges, specifically excluding hazardous waste.

2. "Allocated Capacity" means that capacity in either the Everson Facility or in the Everson Interceptor reserved to a party.

3. "Annual Discharge" means the aggregate wastewater recorded at the Everson Wastewater Treatment Plant from January 1 to December 31 of the preceding year.

4. "BOD5" means the quantity of dissolved oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees centigrade.

5. "Capital Expenditures" means monies expended to upgrade the System. Any upgrade must comply with federal, state and local regulations.

6. "Collector Sewer" means a sanitary sewer receiving wastewater directly from other such collector sewers or service sewers.

7. "Committee" means the standing joint governing committee, established pursuant to this Agreement.

8. "DOE" means the Washington State Department of Ecology, or its successor.

9. "DOH" means the Washington State Department of Health, or its successor.

10. "EPA" means the United States Environmental Protection Agency, or its successor.

11. "Everson Interceptor" consists of the 8-inch gravity sewer extending from the intersection of Greens Lane and E. Main Street to Everson Pump Station No. 4 along the south side of E. Main Street, Everson Pump Station No. 4, and the 6-inch force main extending from Everson Pump Station No. 4 to the Everson Facility.

12. "Everson Collection System" or "Everson System" means that system of sewer mains and pump stations that collect and transport wastewater generated within the City of Everson to the Everson Facility.

13. "Everson Facility" is that sewer treatment facility located at 101 Park Drive, Everson WA 98247, owned and operated by the City of Everson.

14. "Excessive I/I" means excessive infiltration and inflow, which is defined as dry weather flows that exceed an average of 120 gallons per day per person (excluding major commercial or industrial flows greater than 50,000 gpd each) for any 7-14 day period during wet weather months (typically November - March) when there is seasonal high ground water or wet weather flows that exceed 275 gallons per day per person (excluding major commercial or industrial flows greater than 50,000 gpd each) during periods of significant rainfall that create surface ponding and surface runoff.

15. "Expenses" means the costs incurred in the construction, funding, operation, and maintenance of wastewater collection, treatment, and disposal facilities.

16. "Fee" or "Total Fee" means the rates and charges, including professional services, service rates, treatment charges, industrial service charges, maintenance charges, I/I charges, special facility charges and any other charges as provided for in this Agreement to be paid from Nooksack to Everson to account for Nooksack's share of expenses for operation, maintenance and repair of the Everson Facility', Everson Interceptor and Nooksack System.

17. "Fixed Costs" means costs that remain constant month to month and shall include salaries, benefits, copier rental, telephone/telemetry, travel/training, insurance, certification fees, license fees, dues/memberships, capital outlay, and other similar costs.

18. "Flow" means the rate at which water or wastewater moves stated in terms of volume per unit of time.

19. "Flow Meter" means a flow meter at a given location which monitors wastewater flows.

20. "I/I" means infiltration and inflow.

21. "Industrial User" means for wastewater any User identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended and supplemented, under the following divisions:

a. Division A. Agriculture, Forestry and Fishing
b. Division B. Mining
c. Division D. Manufacturing
d. Division E. Transportation, Communications, Electric, Gas, Sanitary Services
e. Division I. Services

A User in the Division listed may be excluded from Industrial User classification if the Everson City Engineer determines that the User will introduce primarily segregated sewage, domestic wastes or waste from sanitary conveniences to the sewage system.

22. "Industrial Waste" or "Non-domestic waste" means the waterborne waste and wastewater from any industrial user.

23. "Infiltration" means groundwater which enters sewers.

24. "Inflow" means storm and other surface waters which enter sewers.

25. "Interceptor" means a sewer whose primary purpose is to transport wastewaters from the collector sewers to a treatment facility.

26. "MGD" means a unit of flow instituting a million gallons per day.

27. "Nonindustrial Wastes" means domestic sewage and liquid waste not classified as industrial waste.

28. "Nooksack Collection System" or "Nooksack System" consists of gravity sewer lines, force mains, grinder pumps and pump stations located within the corporate limits of the City of Nooksack. The Nooksack Collection System ends at the point that the Nooksack force main empties into the Everson Interceptor on E. Main Street at Green's Lane.

29. "NPDES Permit" means the National Pollution Discharge Elimination System Waste Discharge Permit for the Everson Facility.

30. "PL 92-500" means Federal Water Pollution Control Act of 1972 and present amendments.

31. "Point of Delivery, Primary" means the point where Nooksack's Garfield Pump Station forcemain discharges into the 8" Sewer on the south side of E Main Street.

32. "PPD" means pounds per day.

33. "Sewage" or "Domestic wastewater" means wastewater derived from habitation and use of buildings for residential, institutional or commercial purposes (not industrial) and shall include wastewater of similar strength or quality derived from industrial users and industrial waste that has been pre-treated in accordance with Department of Ecology requirements.

34. "System" shall mean the Everson Facility, the Everson Interceptor, the Everson Collection System, and the Nooksack Collection System without regard to ownership.

35. "TSS" or "Total Suspended Solids" means solids that either float on the surface of or are in suspension in wastewater and which are largely removable by standard laboratory filtration procedure.

36. "Treatment Plant" refers to the Everson Facility, as defined above.

37. "ULID" means a utility local improvement district which is an area within which either Everson or Nooksack may levy special assessments on all property receiving benefits of the improvements such as sewers or water lines. The term "ULID" shall also include a local improvement district ("LID").

38. "User" means an individual, firm, establishment, industry, district or city which used the facilities of the water and/or wastewater utilities.

39. "Variable Costs" means costs that vary month to month and shall include supplies, professional services, sludge disposal, utilities, fuel, equipment, maintenance, custodial services, postage, bank fees, tools, and other similar costs.

40. "Volume" means the quantity of water or wastewater.

## III. TERMS AND CONDITIONS

1. **Term.**

1.1 The Term of this Agreement shall be for a period of approximately thirteen (13) years commencing on August 1, 2014, and ending on September 23, 2027, said ending date being forty (40) years from the date of signing of the Restatement and Amendment of the Agreement for Wastewater Treatment and Disposal.

1.2 After such time, this Agreement shall automatically renew for successive five (5) year terms, unless either party shall notify the other party five (5) calendar years prior to the end of the original term or any five (5) year term of this Agreement of its intent to terminate said Agreement and the parties enter into a mutual termination agreement.

1.3 This Agreement shall only be effective upon the approval of each legislative body of the Cities of Everson and Nooksack as evidenced by the signatures below.

2. **Administration.**

2.1 The parties hereto hereby establish and confirm the establishment of a standing Joint Committee for the purpose of advising each City and recommending policies for the operation and maintenance of the Everson Facility, the Everson Interceptor, and each party's collection system (the "Committee"). The Committee shall be comprised of a minimum of five (5) members consisting of two (2) City Council Members from the City of Everson and two (2) City Council Members from the City of Nooksack, plus one (1) additional member selected by the appointed Committee Members. In the event that the four (4) Committee Members cannot agree upon the fifth (5th) Member, the parties shall request that the Whatcom County Executive appoint the fifth (5th) Member. This fifth (5th) Member shall serve for a period of one (1) year, and may be re-appointed annually. The rules of the Committee are subject to the approval of the parties hereto.

2.2 The Committee shall review the need for, cost of and schedule for modifications to or enlargements of the Everson Facility and/or the Everson Interceptor. The Committee shall also review the construction, operation, maintenance and all other applicable costs, as set forth herein or as determined applicable by amendment to this Agreement, related to the collection, transport, treatment and disposal of wastewater to and from the Everson Facility, Everson Interceptor and the Nooksack System. The Committee shall make recommendations to the City Council of Everson and the City Council of Nooksack related to operational, maintenance and other issues related to the Everson Facility, the Everson Interceptor, the Everson System, and the Nooksack System.

2.3 The Committee shall review annual budgets of estimated costs for capital improvement projects related to common facilities, which include the Everson Facility and the Everson Interceptor. Such budgets shall be submitted to the Committee prior to September 30th of each year. The budget shall be based on actual cost experience adjusted to reflect anticipated changes in expenses or modifications and additions to the Everson Facility and the Everson Interceptor, and shall include amounts sufficient to comply with covenants of the parties respectively in connection with outstanding revenue bonds. Committee comments regarding such budgets shall be forwarded to each party by October 31st of each year.

2.4 Everson and Nooksack shall each maintain books and records with respect to the financial operation of their utilities and shall be responsible for establishing rates and charges for services of their respective utilities, and for billing and collecting User fees, assessments and connection charges. Each City agrees to keep and maintain adequate records relative to the sewer collection system of each City. Everson shall also keep and maintain adequate records regarding the treatment, transport and disposal of all wastewater treated at the Everson Facility.

2.5 Nooksack shall, within fifteen (15) business days after written notice to Everson, have the right to inspect all records of Everson relating to the construction, expansion, operation and maintenance of the Everson Facility and the Everson Interceptor. Everson shall, within fifteen (15) business days after written notice to Nooksack, have the right to inspect all records of Nooksack relating to the construction, expansion, operation and maintenance of Nooksack's sewer system.

2.6 In addition, each City at its own cost shall exchange with the other City and the Committee records pertinent to the operation and maintenance of the Everson Facility, the Everson Interceptor, the Nooksack System, and all sewer collection systems located within each others jurisdiction and service areas as necessary or by request, but at least annually. Such records shall include, but shall not be limited to: (1) the average daily flow (in gallons) carried by the sewer lines for each City for the past year; and (2) the average daily amount (in gallons) treated at the Everson Facility for the past year.

2.7 The parties agree that said Committee shall be formed under the applicable laws of the State of Washington including the Open Public Meetings Act.

2.8 The Committee shall meet on a schedule to be determined by the Committee, but generally shall meet at least once per year. The Committee may meet more frequently if deemed necessary to address pending business.

3. **Use of Everson Facility and Everson Interceptor; Allocated Capacity.**

3.1 Everson agrees to accept, treat and dispose of wastewater generated by Nooksack and delivered to the Everson Facility in accordance with the terms and conditions of this Agreement. Everson agrees to accept and treat wastewater delivered to it by Nooksack at the Everson City boundary at the Primary Point of Delivery and at other secondary points of delivery already in place as of the date of this agreement.

3.2 Allocated Capacity in the Everson Facility and the Everson Interceptor is as follows:

3.2.1 Capacity in the Everson Facility shall be allocated as follows:

(1) Everson's allocated capacity in the existing Everson Facility is two-thirds of permitted capacity expressed as follows:
   a. Maximum month design flow – 0.293 mgd
   b. BOD5 influent loading for maximum month - 468 pounds per day (ppd)
   c. TSS influent loading for maximum month – 733 ppd

(2) Nooksack's allocated capacity in the existing Everson Facility is one-third of permitted capacity expressed as follows:
   a. Maximum month design flow – 0.147 mgd
   b. BOD5 influent loading for maximum month – 234 ppd
   c. TSS influent loading for maximum month – 367 ppd

3.2.2 Once the 2014 Everson Facility Upgrade project is completed and Ecology has revised the NPDES discharge permit for the upgraded Facility, the revised allocations of capacity shall be as follows:

(1) Everson: two-thirds of permitted capacity expressed as follows:
   a. Maximum month design flow – 0.441 mgd
   b. BOD5 influent loading for maximum month – 766 ppd
   c. TSS influent loading for maximum month – 1,390 ppd
(2) Nooksack: one-third of permitted capacity expressed as follows:
   a. Maximum month design flow – 0.220 mgd
   b. BOD5 influent loading for maximum month – 383 ppd
   c. TSS influent loading for maximum month – 695 ppd

3.2.3 Everson Allocated Capacity in the Everson Interceptor is one-third (1/3) of the existing capacity and Nooksack Allocated Capacity in the Everson Interceptor is two-thirds (2/3) of the existing capacity as of the date of this Agreement.

3.3 Everson agrees to treat raw domestic sewage and dispose of all components of such treated sewage in compliance with all applicable local, state and federal regulations. Such sewage shall meet current state and federal quality criteria as may be required under applicable permits for such treatment at the point of delivery at the City limits of Everson. Such wastewater treatment and disposal service to Nooksack is in consideration of Nooksack's payment of the Total Fee.

3.4 Nooksack agrees to use the wastewater capacity provided under this Agreement, and by applicable state and federal law, solely for its municipal wastewater and for wastewater generated by residential properties, commercial properties, industrial users, or municipal uses within Nooksack's City limits and designated urban growth area.

3.5 Nooksack agrees that wastes prohibited by EPA or DOE, wastes of unusual quantity or organic strength, waste containing toxic or deleterious matter incompatible with the waste treatment process, or waste that may be harmful to the treatment process or the quality of the receiving waters, shall not be discharged into the Everson System except by special agreement approved by Everson. Consent to such special agreement shall not be unreasonably withheld by Everson provided discharge of such wastewater does not violate any local, state or federal law or requirements, and an amendment to this Agreement is executed providing for Everson's recovery of costs related to such treatment and discharge. As a part of such special agreement, pretreatment by Nooksack may be required.

3.6 Each City shall require any newly constructed or substantially remodeled restaurant located in its jurisdiction that will use its sewer system to obtain a general permit for the discharge of fats, oils and greases. Each City shall also require any such restaurant to install grease traps or other equipment to prevent such substances from causing harm to the Everson Facility.

3.7 Nooksack has made such inquiries and investigations as necessary to ascertain the capabilities of the Everson Facility. Nooksack hereby warrants that the wastewater it shall generate and deliver to Everson is of a type that may be treated by the Facility in the ordinary course as currently operating. Nooksack agrees that any breach of this warranty in the future shall be a breach within the indemnity obligation in subsection 16 herein below.

3.8 Nooksack agrees to direct all wastewater generated from new service connections located within its service area through the metered portion of the Nooksack collection system to the Primary Point of Delivery into the Everson Interceptor. Everson agrees to direct all wastewater generated from new service connections located within its service area through the Everson collection system and not through the Nooksack System.

3.9 The Cities agree to work cooperatively to address circumstances where one of the parties is approaching or has exceeded its Allocated Capacity in either the Everson Interceptor or the Everson Facility. In such circumstances the Committee shall make recommendations to each city council regarding corrective actions to be taken and appropriate adjustments to rates and charges, such as adjustments to the percentage allocation of fixed costs and/or the establishment of penalty charges for use in excess of Allocated Capacities. Any such adjustment to rates and charges shall only become effective upon written approval of both city councils.

3.10 Notwithstanding the forgoing, the parties shall jointly comply with any orders directed to either party as if issued to one party as to system limitations, capacity limitations, and requirements for moratoriums issued by the Department of Health or the Department of Ecology, or their successors.

4. **Permits and Regulations.** Everson shall be responsible for satisfying all local, state and federal permits for wastewater discharge, and all regulatory requirements related to wastewater treatment and disposal. Industrial Users shall likewise be responsible for obtaining any permits governing their waste discharges and for maintaining any records or reports that may be required by the regulatory agencies, including such local, state or federal permits for discharge into the Nooksack System, the Everson System, the Everson Interceptor, and/or the Everson Facility. Prior to permitting the connection of any Industrial User to the Nooksack Collection System, Nooksack shall obtain the favorable recommendation of the Committee and the approval of the City of Everson, which shall not be unreasonably withheld.

5. **Rates and Charges.**

5.1 Nooksack's Total Fee shall have three (3) parts identified and calculated as follows:

5.1.1 Everson Interceptor Fee

*Combined Fixed Costs and Variable Costs:* Fixed Costs and Variable Costs are allocated based upon the allocated capacity in the Everson Interceptor. Two-thirds (2/3) of the Fixed Costs and Variable Costs related to the Everson Interceptor shall be allocated to Nooksack. The remaining one-third of the Fixed Costs and Variable Costs related to the Everson Interceptor shall be allocated to Everson.

5.1.2 Nooksack's Collection System Costs

All costs of operating and maintaining the Nooksack Collection System, including the costs related to reduction of Excessive I/I in the Nooksack Collection System, shall be borne solely by Nooksack. All time and material costs incurred by Everson for work performed on Nooksack's Collection System, excluding costs for normal operation, maintenance and inspections included under Section 5.1.3, but including costs for call-

outs, repairs and capital expenditures, shall be billed to Nooksack. To the maximum extent practicable, Everson shall ensure that all materials, supplies and equipment to be installed or utilized within the Nooksack System shall be billed and delivered directly to Nooksack by the vendor. Except where Nooksack takes over responsibility for such activities, Everson shall perform repair and maintenance on the pump station components of the Nooksack Collection System. Everson shall only perform repair and maintenance on other components of the Nooksack System where specifically requested to do so by Nooksack.

5.1.3 Everson Facility Fee

*Fixed Costs*: Fixed Costs are allocated based upon the allocated capacity in the Everson Facility. One-third (1/3) of the Fixed Costs related to the Everson Facility shall be allocated to Nooksack. The remaining two-thirds (2/3) of the Fixed Costs related to the Everson Facility shall be allocated to Everson. Fixed costs shall include costs for normal operation, maintenance and inspection of the Joint System.

*Variable Costs*: Variable Costs in the Everson Facility are allocated based on measured flow percentage during the corresponding time period, typically 25% Nooksack and 75% Everson. For example, if typical percentages of measured flow are 25% Nooksack and 75% Everson, then 25% of the Variable Costs for the Everson Facility are allocated to Nooksack as part of its Total Fee, and 75% is allocated to Everson. Measured flows shall be determined consistent with Section 5.4, below.

5.2 If deemed necessary, the Committee shall make recommendations to the City Councils of Everson and Nooksack for all components of the Total Fee. Changes to the Total Fee shall require a written amendment of this Agreement approved by both parties.

5.3 When requested by the Committee, Everson shall prepare and submit to the Committee its statement of operations charges for services rendered pursuant to this Agreement.

5.4 Nooksack Flow and Flow Meter. A Flow Meter at or near the point of connection of the Nooksack Collection System and the Everson Interceptor shall be maintained by the City of Everson, subject to replacement at the cost of Nooksack if necessary. Said Flow Meter shall measure the total flow from the Nooksack Collection System to determine the charges for sewage treatment. Metered flows from the Nooksack Collection System shall be increased to account for all Nooksack connections that enter the Interceptor below the Nooksack flow meter based on individual sewer flow meter records, where available, and water meter records provided by the City of Nooksack. Flow from Everson shall be determined by subtracting Nooksack flow from the total effluent flow entering the Everson Facility.

5.5 Charges for Industrial Users. In addition to the wastewater treatment and disposal charge outlined above, if the BOD5, total suspended solids, or other pollutant concentrations from a User exceeds the range of concentration of these pollutants in normal domestic sewage, a surcharge approved by the Committee shall be imposed by Everson or Nooksack, as the case may be, on such User. Such surcharge shall be computed as follows:

$Cs = [Bc(B) + Sc(S) + Pc(P)]Vu$ *where:*

Cs: A surcharge for wastewater of excessive strength

| | |
|---|---|
| B: | Concentration of BOD5 from a User above a base level |
| Bc: | Treatment and disposal cost for a unit of BOD5 |
| P: | Concentration of any pollutant other than BOD5 or TSS from a User above a base level |
| Pc: | Treatment and disposal cost for a unit of any pollutant other than BOD5 or TSS |
| S: | Concentration of TSS from a User above a base level |
| Sc: | Treatment and disposal cost for a unit of TSS |
| Vu: | Treatment contribution from a User per unit of time |

For the purpose of determining the surcharge, 300 milligrams per liter or equivalent concentration shall be used as the base level for BOD5 and TSS. Other pollutants shall be evaluated on a case-by-case basis. In the event of meter malfunctioning, the sewage flow shall be estimated on the basis of the average daily flow for the preceding three (3) month period.

5.6 Everson shall deliver to Nooksack an invoice, including supporting documentation, comprised of all charges set forth in this Agreement on a monthly basis. All invoices shall be paid within thirty (30) calendar days of receipt. Any delay in Everson's delivery of an invoice on a monthly basis shall not relieve Nooksack of its obligation to pay as provided for in this Agreement.

5.7 Consistent with Section 9 of this Agreement, Everson shall deliver to Nooksack separate invoices, including supporting documentation, for all capital expenditures related to the Everson Facility or the Everson Interceptor based on Nooksack's Allocated Capacity in each facility.

6. **Receipt of Domestic Sewage and Industrial Waste.**

6.1 Sewage Collection. Nooksack and Everson shall each be responsible for sewage collection within their respective service areas. Nooksack shall construct sewers and pumping facilities necessary to deliver sewage from its service area to the Everson Interceptor. Any equipment Nooksack installs, including sewage collection systems, and monitoring systems, including, but not limited to, pump stations controls and Flow Meters, shall be reviewed and approved by the City of Everson Public Works Supervisor and Water/Sewer Superintendent, and be compatible with the Everson Facility SCADA System.

6.2 Discharge of Industrial Waste. The ability of any industrial user or other source to discharge industrial waste into either the Everson or Nooksack Collection Systems shall be expressly contingent on the issuance of a Waste Discharge Permit to that user or source by the Washington Department of Ecology. The parties agree not to allow any such discharge of industrial waste until said Discharge Permit has been issued and the conditions established therein, including requirements for pre-treatment, have been met.

6.3 Receipt of Wastewater from a Third Party Source outside the Combined System. Except under unique circumstances neither party shall accept wastewater from a source outside the combined system. Prior to either party's agreeing to accept wastewater from a third-party source from outside the combined system, the party proposing to accept such wastewater shall receive the favorable recommendation of the Committee and approval from the City of Everson.

7. **Infiltration and Inflow.** To the extent practical and by the methods applicable under then applicable EPA guidelines, Nooksack and Everson both agree to remove or prevent the entrance of Excessive I/I into their respective and common collection and treatment systems.

Each City agrees to cooperate with the other City to reduce and eliminate the entrance of Excessive I/I into their system. To the extent practical, each City agrees that it will timely remedy any Excessive I/I in their system. Each City agrees to enact charges and/or penalties for users that fail to timely remedy documented occurrences of Excessive I/I.

8. **System Expansion.**

8.1 Nothing herein shall limit either party's right to extend service within its respective boundaries and to presently unincorporated areas within its Urban Growth Area, provided that such extension of service does not cause said party to exceed its Allocated Capacity. The cost of facilities required to collect and transport wastewater to the Everson Facility shall be borne solely by said party.

8.2 Any future expansion of the Everson Facility or Everson Interceptor for capacity shall be borne by the parties consistent with this Agreement, unless otherwise specifically agreed to by the parties through formal amendment of this Agreement. Future modifications or enlargements may be required to the Everson Facility and the Everson Interceptor to provide sewage collection, treatment and disposal as may be requested by the parties in excess of the Allocated Capacity; however, any such enlargement or modification shall require amendment of this Agreement. Nothing herein limits or bars either party from forming a ULID for the purposes of assessing costs of expansion of their system or acquisition of capacity greater than the Allocated Capacity. The cost of and schedule of such future modifications shall be subject to review and approval by both parties. Costs associated with modifications to the Everson Facility or Everson Interceptor required by the Department of Ecology shall be allocated based upon the applicable Allocated Capacity.

8.3 During the term of this Agreement, in the event that Everson and Nooksack agree to provide for Everson's expansion of the Everson Facility, including but not limited to the modification or enlargement of the Everson treatment and disposal facilities, Nooksack shall bear all costs related to the capacity of the expansion allocated to it for such expansion including its share of all actual costs incurred by Everson related to such expansion, including all administrative costs (including without limitation staff, legal, engineering and other consulting expenses) incurred by Everson unless otherwise established through amendment of this Agreement.

8.4 Nothing herein obligates Everson to expand the Everson Facility or the Everson Interceptor.

9. **Future Modifications Related to System Upgrades and System Maintenance.** All capital expenditures, as defined under definitions, to either the Everson Facility or the Everson Interceptor necessary for the maintenance and operation of the Everson Facility and the Everson Interceptor, including any capital expenditures related to compliance with local, state and federal permit requirements and conditions as they exist today or may exist in the future shall be borne by Everson and Nooksack in proportion to each City's Allocated Capacity in each facility.

10. **Maintenance and Inspection.**

10.1 In addition to any other provision of this Agreement, the parties shall ensure that all sewer lines and equipment located in their respective Cities are maintained in good operating order and shall further ensure that said lines and equipment are not negatively impacting, or otherwise impeding, the operation of any portion of the Everson Facility, Everson Interceptor, the Everson System and/or the Nooksack System in accordance with applicable DOE or DOH Guidelines.

10.2 Everson, at its sole cost and expense, also has the right to inspect and test all sewer lines and equipment located in Nooksack or their service area which may affect the Everson Facility and the Everson Interceptor, including such inspections and tests as may be necessary to control I/I. Nooksack, at its sole cost and expense, also has the right to inspect and test all sewer lines and equipment (excluding the Everson Facility) located in Everson that may affect the Nooksack System. All such inspections shall include advance notification whenever possible. If upon inspection either City discovers conditions or equipment that are negatively impacting, or otherwise impeding, their operation of their respective systems and/or facilities, they may demand, in writing, that the other City satisfactorily rectify such conditions or equipment. If either City fails to replace or repair such equipment within the reasonable time prescribed in the written notice, the requesting City may do so and bill the offending City for the cost thereof. Both Cities shall be liable for any damage caused to the other's facility and system by sewer lines or equipment located in their respective City that are not performing or inadequately performing, and they shall also be liable for all costs incurred due to such damage. Everson agrees to perform repair and maintenance on the pump station components of the Nooksack Collection System, but no other portion of the Nooksack Collection System unless specifically requested to do so by Nooksack, provided however, that such repair costs, excluding costs for normal operation, maintenance and inspections, shall be recoverable by Everson from Nooksack as a component of the Total Fee billed to Nooksack as provided for in Section 5.1 above and subject to the payment terms as provided for in Section 5.6 above.

10.3 Maintenance of the Everson Facility and the Everson Interceptor, including routine maintenance and major repairs, shall be Everson's responsibility; provided, however, that the costs associated with all such maintenance shall be allocated as set forth in Section 5.1. Except in emergency repair situations when time for coordination and consultation between the parties is not available, Everson shall coordinate and consult with Nooksack regarding available repair and maintenance options on all actions for which the total estimated cost exceeds $5,000.00.

11. **Insurance.** Everson and Nooksack shall each obtain and maintain insurance on their respective sewage systems with responsible carriers and with such coverage and such deductibles in amounts as shall be approved from time to time by each party's City Council. The insurance required above for Everson shall include the Everson Interceptor and the Everson Facility.

12. **Selling or Leasing of Capacity in Everson Facility.** Selling of capacity in the Everson Facility between the parties on a permanent basis and/or leasing of capacity by one party on a short-term basis in advance of a planned upgrade to the Everson Facility shall require amendment of this Agreement to establish the agreed upon value of any such sale or lease of capacity and the terms under which such capacity could by sold or leased.

13. **Changes to Allocated Capacity.** Any change to the Allocated Capacity for either party shall require amendment of this Agreement approved by both City Councils.

14. **Reclaimed Water.** No provision has been made in this Agreement for the development of reclaimed water facilities; however, the parties agree to cooperate in the future to evaluate when changed circumstances warrant further evaluation of the need for and cost-effectiveness of such facilities.

15. **Sludge Disposal.** The parties acknowledge that future increases in costs related to sludge disposal may warrant further evaluation of alternatives to current disposal methods, and the parties agree to cooperate in determining when such additional evaluation is necessary.

16. **Indemnification.**

16.1 Nooksack shall indemnify Everson for any liability accruing as a result of the operation of the Nooksack Collection System and for industrial waste discharges originating in Nooksack's service area.

16.2 Without limiting Section 16.1, above, to the fullest extent permitted by law, Nooksack agrees to indemnify and hold harmless Everson or its agents or employees against any and all liability or claims arising from the negligent or willful acts or omissions of Nooksack or its agents or employees relating to Nooksack's performance under this Agreement, including but not limited to liability derived from state and federal environmental administrative findings or orders or actions or claims for damages on account of injury to person, or property or the environment caused by any act or omission of Nooksack, its agents or employees or any fine, penalties or monetary awards which arise out of Nooksack's acts or omissions under the terms of this Agreement.

16.3 Without limiting Section 16.1, above, to the fullest extent permitted by law, Everson agrees to indemnify and hold harmless Nooksack or its agents or employees against any and all liability or claims arising from the negligent or willful acts or omissions of Everson or its agents or employees relating to Everson's performance under this Agreement, including but not limited to liability derived from state and federal environmental administrative findings or orders or actions or claims for damages on account of injury to person, or property or the environment caused by any act or omission of Everson, its agents or employees or any fine, penalties or monetary awards which arise out of Everson's acts or omissions under the terms of this Agreement.

17. **Remedies.**

17.1 If either party fails to perform any obligation under this Agreement, the other party may perform on behalf of the defaulting party and charge the reasonable costs thereof, including administrative time, to the defaulting party as a sum due under this Agreement, provided written notice is given to the defaulting party allowing it a reasonable time to cure the default.

17.2 If either party fails to fulfill any material obligation or condition of this Agreement, the other party has the right to terminate this Agreement in accordance with DOE or DOH guidelines by giving sixty (60) days written notice of its intent to do so. Upon receipt of such notice, the party shall have the right to prevent termination by curing the default within thirty (30) days. Termination shall not release Nooksack from its obligation to pay all invoices or sums owed for services previously rendered in accordance with the terms of this Agreement.

17.3 If an administrative agency, board, commission or division of the state or federal government or any court materially impairs, alters, restricts or limits, directly or indirectly, Everson's right or authority to maintain, sell, contract for, or permit wastewater disposal as set forth in this Agreement, Everson, in its sole discretion reasonably exercised, may terminate and void this Agreement by written notice to Nooksack. Termination under this provision shall not release Nooksack from its obligation to pay all invoices or sums owed for services previously rendered unless to do so would be in violation of a final administrative or judicial decree, order or ruling. Everson will notify Nooksack of any formal proceedings or orders so that Nooksack may participate in such proceedings if it so chooses.

17.4 Any invoice remaining unpaid after the thirtieth (30th) day from the date of billing, excluding time tolled to allow Everson to respond to reasonable requests for information and clarification regarding said billing, or the due dates as specified in this Agreement, whichever is later, shall bear interest at the rate of twelve percent (12%) annually computed from the end of the governing period.

18. **Governing Law, Venue, and Arbitration.** This Agreement shall be governed by the laws of the State of Washington. Venue of any legal action shall be in the Superior Court for Whatcom County, Washington. The prevailing party in any litigation shall be entitled to reasonable attorneys' fees and costs. Any dispute arising out of this Agreement shall, at the request of either party (except where the agreement of both parties is required herein), be submitted to binding arbitration as provided below. The parties shall select an independent and unbiased arbitrator within ten (10) days after either party demands arbitration. If the parties fail to select, or cannot agree upon an arbitrator within this time, then either party may request the presiding Superior Court Judge of Whatcom County, pursuant to RCW 7.04A et seq. for an order appointing an arbitrator. The Court shall select an arbitrator. The arbitrator shall set the matter for hearing and render his or her decision if at all reasonably possible within sixty (60) days after his/her appointment. The arbitration shall be conducted pursuant to the Mandatory Arbitration Rules for Whatcom County Superior Court ("MAR"). The arbitrator's decision shall be binding on both parties. Each party shall bear its own expenses associated with the arbitration but shall share equally the costs of the arbitrator. RCW Chapter 7.04A and MAR shall govern the arbitration. In the event of any inconsistencies in these rules, the binding arbitration provisions of this Agreement shall take precedence.

19. **Termination.** This Agreement shall only be terminated by mutual agreement of the parties hereto, and said termination agreement shall be in writing and fully executed by both parties. In the event that either party terminates this Agreement for any reason permitted herein and consistent with DOE and DOH regulations, other than a threat of imminent harm to the Everson Facility or the Everson Interceptor, Everson shall be obligated to continue to accept and treat wastewater from Nooksack until such time as Nooksack is able to implement an alternative wastewater treatment disposal plan. Nooksack shall use its best efforts to adopt such an alternative plan as soon as practicably possible.

20. **Construction of Agreement.** This Agreement shall constitute the entire agreement between Nooksack and Everson with respect to the provision of wastewater collection and treatment by Everson to Nooksack. The parties hereto agree that the Restated Agreement for Wastewater Treatment and Disposal dated September 23, 1987 and all subsequent amendments thereto preceding this Agreement are hereby rescinded, having been restated in full as amended in this Agreement. All claims, demands, disputes, differences, and misunderstandings concerning this Agreement and its interpretation that may arise between any of the parties hereto from the date hereof until the termination of this Agreement shall be

resolved as provided for in Section 14, provided however the parties do encourage each other to pursue mediation and the use of the Committee to resolve disputes to the extent feasible. This Agreement shall be construed liberally to effect its purposes. Notwithstanding the foregoing, the 1989 Interlocal Agreement dated April 14, 1989, between the parties shall remain in effect only to the extent that it does not conflict with other provisions of this Agreement, only for the purposes necessary to validate the 1989 Notes, and then only so long as the 1989 Notes remain outstanding. Effective without further action required, when the 1989 Notes are no longer outstanding and such debt is paid, the 1989 Interlocal Agreement dated April 14, 1989 shall be of no force or effect.

21. **Effective Date of This Agreement.** This Agreement shall be in full force and binding on both parties upon its execution following approval by each party's City Council. The effective date of this Agreement shall be August 1, 2014.

**IN WITNESS WHEREOF**, the parties have executed this Agreement as of the day and year first above written.

**CITY OF EVERSON**

JOHN PERRY, Mayor

**CITY OF NOOKSACK**

JAMES ACKERMAN, Mayor

**ATTEST:**

JENNIFER BELL, City of Everson Clerk-Treasurer

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# 9. Economic Development Element

This chapter is a required element of a comprehensive plan that has been initially developed to meet the main provisions of the GMA. In overview, this chapter presents a brief description of the economic setting in Everson followed by economic development goals and policies.

## Existing Conditions

### Economic Profile

The city of Everson is located near the Canadian border in western Whatcom County, approximately 18 miles northeast of the city of Bellingham. The city of Nooksack is immediately to the northeast. State Route 544, a freight route to Canada, runs directly through Everson. The city has two main zoning categories intended for economic development: Commercial and Light Industrial.

### Commercial Zoning

Most businesses in town are located northeast of the River, along Main St (SR 544). This area is often referred to as "Downtown Everson" and is mostly zoned as commercial. Businesses in this area include multi-use office buildings, auto parts stores, restauarants, banks, a market, hair salons, a laundromat, auto repair shops, healthcare facilities, and a building materials store. Downtown Everson also hosts the locations of major manufacturing employers in the city such as Nylatech, Trayvax, Criterion Atheletic, and Christensen Net Works.

The majority of downtown Everson is prone to flood events. This area is currently designated as a mix of the 500-year floodplain and the 100-year floodplain. However, City officials believe that the entirety of this area functions as a 100-year floodplain. Consistent with the best available science, draft FEMA maps have put most of downtown Everson into the 100-year floodplain.

Southwest Everson has a small area zoned as commercial. This area was recently annexed into the city and has minimal economic development. Located in this area is the Everson Auction Barn and La Gloria Corner Market.

### Light Industrial Zoning

The city's light industrial zone is located west of the river in several locations. The businesses in this zone include manufacturing, storage facilities, farms, and construction-related businesses.

Along Everson Rd is the majority of the industrial zone. Much of this area is located within the 100-year floodplain. The northernmost developed area is a dry-storage facility. South of this business are parcels occupied by non-conforming residential structures. The southern portion houses a cabinet manufacturing warehouse and a farm. A large majority of this area is located in the wellhead protection zone, which places development restrictions on various industrial practices.

The cities largest employer, South Everson Lumber Company (SELCO), is in the southern industrial zone of the city, adjacent to Mission Rd. South of SELCO is a large undeveloped light industrial area.

## Future Conditions

The commercial businesses in Everson will continue to serve the local and travelling public. The city should focus on mitigation efforts to protect both commercial and light industrial uses within the City from flood events.

As the City continues to develop on the west side of town, city officials would like to promote the expansion of the existing commercial zoning district to encourage business growth outside of the floodplain.

Light industrial areas are currently occupied by non-conforming residential housing. The city would like to see these parcels converted to light industrial uses to further promote job growth and increase the city's tax base.

As part of the 2026 update of the Whatcom County comprehensive plan, the city proposed the addition of a 34-acre future mixed-use area located west of city limits. This area abuts the existing southwest Everson commercial zone and is located at the intersection of Van Dyk Rd and Everson-Goshen Rd (SR 544). Future residential development around this area will bring an increased need for local employment.

## Goals and Policies

Goal. Maintain and promote accessible access to economic centers in Everson.

Policy: The City should maintain an adequate supply of commercially zoned land to serve local residents and the travelling public.

Policy: The City should work with business owners to ensure an adequate supply of on-street and off-street parking to serve commercial businesses.

Policy: The City should prioritize increasing and maintaining multi-modal access to downtown Everson.

Goal. Expand opportunities for industrial development within Everson.

Policy: The City should encourage private property owners to develop lands within Everson that are well-suited for light industrial and manufacturing operations to provide jobs for local residents.

Goal. Attract new businesses to increase jobs that provide living wages to serve residents and expand the tax base.

Policy: The City should maintain connection charges at levels that support the establishment of new businesses within Everson.

Policy: The City should maintain permit application review procedures that process applications in an efficient manner.

Policy: The City should encourage the growth of various types of businesses to promote a diverse economy.

Goal. Support existing businesses within Everson.

Policy: The City should work with and support local business owners to help build a strong city-wide economic partnerships.

Policy: The City should develop strategies for economic recovery in the event of a economic collapse or natural disaster.

Policy: The City should educate and support local businesses on flood mitigation strategies.

Goal: Promote the development and revitalization of economic centers in the city.

Policy: The City should encourage public improvements such as landscaping, park benches, street lighting, and safe road crossings.

Policy: The City should encourage mixed use developments in appropriate areas.

Policy: The City should look into mitigation options to protect downtown Everson from flood inundation.

# Memo

**To:** Everson City Council

**From:** Savannah Larson, Finance Director/City Clerk

**Date:** May 26, 2026

**Re:** Surplus Equipment-4 computers

I am requesting the City Council authorize NW Technology to surplus the following City equipment that is no longer of value to the City:

| Computer | Description | Location | Release Year | Model |
|---|---|---|---|---|
| COE-28 | Old Laptop | Upstairs | 2015 | Latitude E5550 |
| COE-29 | Old Court Computer | Upstairs | 2016 | OptiPlex 3240 AIO |
| COE-30 | Old Court Computer | Upstairs | 2016 | OptiPlex 3240 AIO |
| COE-31 | Old Court Computer | Upstairs | 2016 | OptiPlex 3240 AIO |

Sincerely,

Savannah Larson

# Voucher Directory

Fiscal: : 2026 - May
Council Date: : 2026 - May - 2nd Council

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| **A-1 Shredding, Inc.** | | | | | |
| | **37935** | | **2026 - May - 2nd Council** | | |
| | | **4242** | | | |
| | | | 001-000-000-512-51-41-04 | Custodial Service | $20.00 |
| | | | 001-000-000-514-23-41-04 | Custodial Service | $20.00 |
| | | | 001-000-000-518-30-41-04 | Custodial Services | $20.00 |
| | | **Total 4242** | | | **$60.00** |
| | **Total 37935** | | | | **$60.00** |
| **Total A-1 Shredding, Inc.** | | | | | **$60.00** |
| **Bellingham Business Machines** | | | | | |
| | **37936** | | **2026 - May - 2nd Council** | | |
| | | **220866** | | | |
| | | | 001-000-000-512-51-45-00 | Copier Rental | $15.42 |
| | | | 001-000-000-514-23-45-00 | Copier Rental | $15.42 |
| | | | 001-000-000-518-10-45-00 | Copier Rental | $15.42 |
| | | | 001-000-000-521-50-45-00 | Copier Rental | $46.93 |
| | | | 001-000-000-524-10-45-00 | Copier Rental | $15.42 |
| | | | 001-000-000-558-60-45-00 | Copier Rental | $15.42 |
| | | | 401-000-000-534-10-45-00 | Water Copier Rental | $15.42 |
| | | | 401-000-000-535-10-45-00 | Sewer Copier Rental | $15.42 |
| | | | 401-000-000-535-10-45-01 | WWTP Copier Rental | $15.43 |
| | | **Total 220866** | | | **$170.30** |
| | **Total 37936** | | | | **$170.30** |
| **Total Bellingham Business Machines** | | | | | **$170.30** |
| **Burke Septic & Pumping Services LLC** | | | | | |
| | **37937** | | **2026 - May - 2nd Council** | | |
| | | **35981** | | | |
| | | | 001-000-000-576-80-41-00 | Park Professional Services | $400.00 |
| | | **Total 35981** | | | **$400.00** |
| | **Total 37937** | | | | **$400.00** |
| **Total Burke Septic & Pumping Services LLC** | | | | | **$400.00** |
| **Cascade Natural Gas Co.** | | | | | |
| | **EFT Cascade Nat. Gas May 2026** | | **2026 - May - 2nd Council** | | |
| | | **085 295 6173 3 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $14.20 |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | | | 401-000-000-535-80-47-00 | Sewer Utility Services | $14.19 |
| | | **Total 085 295 6173 3 May 2026** | | | **$28.39** |
| | | **111 265 9195 4 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $47.16 |
| | | **Total 111 265 9195 4 May 2026** | | | **$47.16** |
| | | **222 761 4970 9 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $31.70 |
| | | **Total 222 761 4970 9 May 2026** | | | **$31.70** |
| | | **339 390 0000 7 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $16.20 |
| | | | 401-000-000-535-80-47-00 | Sewer Utility Services | $16.20 |
| | | **Total 339 390 0000 7 May 2026** | | | **$32.40** |
| | | **339 426 9435 8 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $17.40 |
| | | | 401-000-000-535-80-47-00 | Sewer Utility Services | $17.40 |
| | | **Total 339 426 9435 8 May 2026** | | | **$34.80** |
| | | **472 245 7124 1 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $29.69 |
| | | **Total 472 245 7124 1 May 2026** | | | **$29.69** |
| | | **742 490 0000 6 May 2026** | | | |
| | | | 001-000-000-576-80-47-00 | Park Utility Services | $33.74 |
| | | **Total 742 490 0000 6 May 2026** | | | **$33.74** |
| | | **757 390 0000 0 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $607.67 |
| | | **Total 757 390 0000 0 May 2026** | | | **$607.67** |
| | | **857 390 0000 9 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $43.13 |
| | | **Total 857 390 0000 9 May 2026** | | | **$43.13** |
| | | **882 605 2349 8 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $15.54 |
| | | | 401-000-000-535-80-47-00 | Sewer Utility Services | $15.53 |
| | | **Total 882 605 2349 8 May 2026** | | | **$31.07** |
| | | **968 390 0000 5 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $13.51 |
| | | | 401-000-000-535-80-47-00 | Sewer Utility Services | $13.52 |
| | | **Total 968 390 0000 5 May 2026** | | | **$27.03** |
| | **Total EFT Cascade Nat. Gas May 2026** | | | | **$946.78** |
| **Total Cascade Natural Gas Co.** | | | | | **$946.78** |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| **Cesco New Concept Products, Inc.** | | | | | |
| | **37938** | | **2026 - May - 2nd Council** | | |
| | | **1733586** | | | |
| | | | 401-000-000-535-80-31-01 | WWTP Supplies | $758.05 |
| | | **Total 1733586** | | | **$758.05** |
| | **Total 37938** | | | | **$758.05** |
| **Total Cesco New Concept Products, Inc.** | | | | | **$758.05** |
| | | | | | |
| **City of Everson** | | | | | |
| | **37939** | | **2026 - May - 2nd Council** | | |
| | | **1624.0 May 2026** | | | |
| | | | 001-000-000-576-80-47-00 | Park Utility Services | $0.05 |
| | | **Total 1624.0 May 2026** | | | **$0.05** |
| | | **1624.1 May 2026** | | | |
| | | | 001-000-000-521-50-47-00 | Utility Services | $6.09 |
| | | **Total 1624.1 May 2026** | | | **$6.09** |
| | | **1624.11 May 2026** | | | |
| | | | 401-000-000-534-80-47-00 | Water Utility Services | $33.51 |
| | | **Total 1624.11 May 2026** | | | **$33.51** |
| | | **1624.12 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $3.73 |
| | | **Total 1624.12 May 2026** | | | **$3.73** |
| | | **1624.13 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $1.85 |
| | | **Total 1624.13 May 2026** | | | **$1.85** |
| | | **1624.15 May 2026** | | | |
| | | | 001-000-000-576-80-47-00 | Park Utility Services | $0.01 |
| | | **Total 1624.15 May 2026** | | | **$0.01** |
| | | **1624.3 May 2026** | | | |
| | | | 401-000-000-535-80-47-01 | WWTP Utility Services | $18.74 |
| | | **Total 1624.3 May 2026** | | | **$18.74** |
| | | **1624.4 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $1.69 |
| | | **Total 1624.4 May 2026** | | | **$1.69** |
| | | **1624.5 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $1.09 |
| | | **Total 1624.5 May 2026** | | | **$1.09** |
| | | **1624.6 May 2026** | | | |
| | | | 001-000-000-576-80-47-00 | Park Utility Services | $0.01 |
| | | **Total 1624.6 May 2026** | | | **$0.01** |
| | | **1624.7 May 2026** | | | |
| | | | 401-000-000-535-80-47-01 | WWTP Utility Services | $0.77 |
| | | **Total 1624.7 May 2026** | | | **$0.77** |
| | | **1624.9 May 2026** | | | |
| | | | 001-000-000-518-30-47-00 | Utility Services | $0.74 |
| | | **Total 1624.9 May 2026** | | | **$0.74** |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | **Total 37939** | | | | **$68.28** |
| **Total City of Everson** | | | | | **$68.28** |
| **Comcast** | | | | | |
| | **37940** | | **2026 - May - 2nd Council** | | |
| | | **8498 30 009 0151131 May 2026** | | | |
| | | | 401-000-000-534-80-42-00 | Water Telephone/Internet Services | $166.84 |
| | | | 401-000-000-535-80-42-00 | Sewer Telephone/Internet | $166.84 |
| | | **Total 8498 30 009 0151131 May 2026** | | | **$333.68** |
| | **Total 37940** | | | | **$333.68** |
| **Total Comcast** | | | | | **$333.68** |
| **CSD Attorneys At Law** | | | | | |
| | **37941** | | **2026 - May - 2nd Council** | | |
| | | **136359** | | | |
| | | | 001-000-000-515-41-41-01 | COE Legal Expenses | $4,743.00 |
| | | **Total 136359** | | | **$4,743.00** |
| | | **136361** | | | |
| | | | 001-000-000-515-41-41-01 | COE Legal Expenses | $180.00 |
| | | **Total 136361** | | | **$180.00** |
| | | **136362** | | | |
| | | | 001-000-000-515-41-41-02 | COE Legal Expenses Court/Police | $2,845.00 |
| | | **Total 136362** | | | **$2,845.00** |
| | | **136363** | | | |
| | | | 001-000-000-515-41-41-01 | COE Legal Expenses | $369.00 |
| | | **Total 136363** | | | **$369.00** |
| | **Total 37941** | | | | **$8,137.00** |
| **Total CSD Attorneys At Law** | | | | | **$8,137.00** |
| **Department of Licensing** | | | | | |
| | **EFT ES0000862-ES0000866** | | **2026 - May - 2nd Council** | | |
| | | **ES0000862-ES0000866** | | | |
| | | | 631-000-000-589-30-00-20 | State Fee Gun Permits | $93.00 |
| | | **Total ES0000862-ES0000866** | | | **$93.00** |
| | **Total EFT ES0000862-ES0000866** | | | | **$93.00** |
| **Total Department of Licensing** | | | | | **$93.00** |
| **Dept. of Revenue** | | | | | |
| | **EFT April 2026 Excise Tax** | | **2026 - May - 2nd Council** | | |
| | | **April 2026 Excise Tax** | | | |
| | | | 401-000-000-534-10-40-00 | Water Excise Tax | $1,846.23 |
| | | | 401-000-000-535-10-40-00 | Sewer Excise Tax | $2,676.67 |
| | | | 401-000-000-535-80-31-01 | WWTP Supplies | $7.42 |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | | | 631-000-000-589-30-00-00 | Sales Tax Remitted | $3.24 |
| | | **Total April 2026 Excise Tax** | | | **$4,533.56** |
| | **Total EFT April 2026 Excise Tax** | | | | **$4,533.56** |
| **Total Dept. of Revenue** | | | | | **$4,533.56** |
| | | | | | |
| **Exact Scientific Services Inc** | | | | | |
| | **37942** | | **2026 - May - 2nd Council** | | |
| | | **26-07831** | | | |
| | | | 401-000-000-534-80-41-00 | Water Professional Services | $328.00 |
| | | **Total 26-07831** | | | **$328.00** |
| | | **26-08930** | | | |
| | | | 401-000-000-534-80-41-00 | Water Professional Services | $261.00 |
| | | **Total 26-08930** | | | **$261.00** |
| | | **26-09616** | | | |
| | | | 401-000-000-534-80-41-00 | Water Professional Services | $29.00 |
| | | **Total 26-09616** | | | **$29.00** |
| | | **26-10148** | | | |
| | | | 401-000-000-534-80-41-00 | Water Professional Services | $145.00 |
| | | **Total 26-10148** | | | **$145.00** |
| | | **26-10287** | | | |
| | | | 401-000-000-534-80-41-00 | Water Professional Services | $29.00 |
| | | **Total 26-10287** | | | **$29.00** |
| | **Total 37942** | | | | **$792.00** |
| **Total Exact Scientific Services Inc** | | | | | **$792.00** |
| | | | | | |
| **Lynden Tribune** | | | | | |
| | **37943** | | **2026 - May - 2nd Council** | | |
| | | **198131** | | | |
| | | | 001-000-000-511-30-44-00 | Publication & Advertising | $166.25 |
| | | **Total 198131** | | | **$166.25** |
| | | **198132** | | | |
| | | | 001-000-000-511-30-44-00 | Publication & Advertising | $89.06 |
| | | **Total 198132** | | | **$89.06** |
| | **Total 37943** | | | | **$255.31** |
| **Total Lynden Tribune** | | | | | **$255.31** |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| **Mateo Meadows LLC** | | | | | |
| | **37934** | | **2026 - May - 2nd Council** | | |
| | | **Habitat for Humanity #13 Reimbursement** | | | |
| | | | 631-000-000-589-40-00-00 | Habitat for Humanity Reimbursement | $1,868.43 |
| | | **Total Habitat for Humanity #13 Reimbursement** | | | **$1,868.43** |
| | **Total 37934** | | | | **$1,868.43** |
| **Total Mateo Meadows LLC** | | | | | **$1,868.43** |
| | | | | | |
| **Nathan's Custom Cars** | | | | | |
| | **37944** | | **2026 - May - 2nd Council** | | |
| | | **Car#15 2016 Police Interceptor** | | | |
| | | | 001-000-000-521-50-48-01 | Equipment Maintenance | $360.39 |
| | | **Total Car#15 2016 Police Interceptor** | | | **$360.39** |
| | | **Riverboat May 2026** | | | |
| | | | 001-000-000-521-50-48-01 | Equipment Maintenance | $473.28 |
| | | **Total Riverboat May 2026** | | | **$473.28** |
| | **Total 37944** | | | | **$833.67** |
| **Total Nathan's Custom Cars** | | | | | **$833.67** |
| | | | | | |
| **P3 MATERIALS & SUPPLIES** | | | | | |
| | **37945** | | **2026 - May - 2nd Council** | | |
| | | **2712** | | | |
| | | | 001-000-000-525-30-30-00 | Disaster Recovery | $25.72 |
| | | | 301-000-000-525-30-30-00 | Disaster Recovery- Streets (City Hall) | $0.97 |
| | | | 402-000-000-525-30-30-00 | Disaster Recovery- Water (City Hall) | $4.20 |
| | | | 403-000-000-525-30-30-00 | Disaster Recovery- Sewer (City Hall) | $4.20 |
| | | | 403-000-000-525-30-30-01 | Disaster Recovery- WWTP (City Hall) | $3.72 |
| | | **Total 2712** | | | **$38.81** |
| | | **2732** | | | |
| | | | 001-000-000-525-30-30-00 | Disaster Recovery | $13.53 |
| | | | 301-000-000-525-30-30-00 | Disaster Recovery- Streets (City Hall) | $0.51 |
| | | | 402-000-000-525-30-30-00 | Disaster Recovery- Water (City Hall) | $2.21 |
| | | | 403-000-000-525-30-30-00 | Disaster Recovery- Sewer (City Hall) | $2.21 |
| | | | 403-000-000-525-30-30-01 | Disaster Recovery- WWTP (City Hall) | $1.96 |
| | | **Total 2732** | | | **$20.42** |
| | | **2742** | | | |
| | | | 001-000-000-525-30-30-00 | Disaster Recovery | $80.41 |
| | | | 301-000-000-525-30-30-00 | Disaster Recovery- Streets (City Hall) | $3.03 |
| | | | 402-000-000-525-30-30-00 | Disaster Recovery- Water (City Hall) | $13.15 |
| | | | 403-000-000-525-30-30-00 | Disaster Recovery- Sewer (City Hall) | $13.15 |
| | | | 403-000-000-525-30-30-01 | Disaster Recovery- WWTP (City Hall) | $11.64 |
| | | **Total 2742** | | | **$121.38** |
| | **Total 37945** | | | | **$180.61** |
| **Total P3 MATERIALS & SUPPLIES** | | | | | **$180.61** |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| **Peoples Bank - Cardmember Service** | | | | | |
| | **37946** | | **2026 - May - 2nd Council** | | |
| | | **Barry CC - April 2026** | | | |
| | | | 001-000-000-521-50-35-00 | Small Tools/Equipment | $35.46 |
| | | **Total Barry CC - April 2026** | | | **$35.46** |
| | | **Faulkner CC - April 2026** | | | |
| | | | 001-000-000-524-10-20-10 | PW Uniform Allowance | $76.36 |
| | | | 001-000-000-524-10-43-00 | Travel/Training | $20.42 |
| | | | 401-000-000-534-10-20-10 | Water Uniform Allowance | $38.19 |
| | | | 401-000-000-535-10-20-10 | Sewer Uniform Allowance | $38.19 |
| | | **Total Faulkner CC - April 2026** | | | **$173.16** |
| | | **Ginn CC - April 2026** | | | |
| | | | 001-000-000-521-40-43-00 | Travel/Training Expense | $124.68 |
| | | | 001-000-000-521-50-35-00 | Small Tools/Equipment | $141.39 |
| | | | 001-000-000-525-30-30-00 | Disaster Recovery | $195.74 |
| | | **Total Ginn CC - April 2026** | | | **$461.81** |
| | | **Hadeen CC - April 2026** | | | |
| | | | 001-000-000-514-23-42-01 | Postage | $10.48 |
| | | **Total Hadeen CC - April 2026** | | | **$10.48** |
| | | **Hanowell CC - April 2026** | | | |
| | | | 001-000-000-512-51-42-01 | Postage | $4.61 |
| | | | 001-000-000-512-51-43-00 | Travel/Training Expense | $41.02 |
| | | **Total Hanowell CC - April 2026** | | | **$45.63** |
| | | **Larson CC - April 2026** | | | |
| | | | 001-000-000-524-10-41-03 | IT Service | $179.52 |
| | | | 001-000-000-558-60-41-40 | IT Service | $359.04 |
| | | | 001-000-000-576-80-41-03 | Park IT Service | $44.88 |
| | | | 101-000-000-543-30-41-03 | IT Service | $44.88 |
| | | | 401-000-000-534-10-41-03 | Water IT Service | $269.28 |
| | | | 401-000-000-535-10-41-00 | Sewer IT Service | $269.28 |
| | | | 401-000-000-535-10-41-01 | WWTP IT Service | $628.32 |
| | | **Total Larson CC - April 2026** | | | **$1,795.20** |
| | | **MacPhee CC - April 2026** | | | |
| | | | 001-000-000-521-10-20-01 | Uniforms | $162.11 |
| | | **Total MacPhee CC - April 2026** | | | **$162.11** |
| | | **Tiemersma CC - April 2026** | | | |
| | | | 001-000-000-521-10-31-00 | Supplies | $38.63 |
| | | **Total Tiemersma CC - April 2026** | | | **$38.63** |
| | | **Valum CC - April 2026** | | | |
| | | | 001-000-000-521-40-43-00 | Travel/Training Expense | $169.00 |
| | | **Total Valum CC - April 2026** | | | **$169.00** |
| | | **VanDyken CC - April 2026** | | | |
| | | | 001-000-000-576-80-31-00 | Park Supplies | $609.75 |
| | | **Total VanDyken CC - April 2026** | | | **$609.75** |
| | | **Witman CC- April 2026** | | | |
| | | | 401-000-000-534-10-43-00 | Water Travel/Training | $470.91 |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | | | 401-000-000-535-40-43-01 | WWTP Travel/Training Expense | $470.90 |
| | | **Total Witman CC- April 2026** | | | **$941.81** |
| | **Total 37946** | | | | **$4,443.04** |
| **Total Peoples Bank - Cardmember Service** | | | | | **$4,443.04** |
| | | | | | |
| **Polydyne Inc.** | | | | | |
| | **37947** | | **2026 - May - 2nd Council** | | |
| | | **2025845** | | | |
| | | | 401-000-000-535-80-31-01 | WWTP Supplies | $979.20 |
| | | **Total 2025845** | | | **$979.20** |
| | **Total 37947** | | | | **$979.20** |
| **Total Polydyne Inc.** | | | | | **$979.20** |
| | | | | | |
| **Premium Services Inc.** | | | | | |
| | **37958** | | **2026 - May - 2nd Council** | | |
| | | **Progress Payment No. 2 - S. Harkness Reconstruction** | | | |
| | | | 301-000-000-595-30-63-15 | Reeds Ln/Emerson Rd Construction | $73,196.17 |
| | | | 402-000-000-594-35-63-15 | Reeds Ln/Emerson Rd Construction - Water | $86,964.97 |
| | | | 403-000-000-594-35-63-15 | Reeds Ln/Emerson Rd Construction - Sewer | $49,502.73 |
| | | **Total Progress Payment No. 2 - S. Harkness Reconstruction** | | | **$209,663.87** |
| | **Total 37958** | | | | **$209,663.87** |
| **Total Premium Services Inc.** | | | | | **$209,663.87** |
| | | | | | |
| **Pump Tech, Inc.** | | | | | |
| | **37948** | | **2026 - May - 2nd Council** | | |
| | | **20587** | | | |
| | | | 401-000-000-534-50-48-00 | Water Equipment Maintenance | $1,017.58 |
| | | **Total 20587** | | | **$1,017.58** |
| | | **21003** | | | |
| | | | 401-000-000-534-50-48-00 | Water Equipment Maintenance | $387.28 |
| | | **Total 21003** | | | **$387.28** |
| | **Total 37948** | | | | **$1,404.86** |
| **Total Pump Tech, Inc.** | | | | | **$1,404.86** |
| | | | | | |
| **Reichhardt & Ebe Engineering Inc.** | | | | | |
| | **37949** | | **2026 - May - 2nd Council** | | |
| | | **36787** | | | |
| | | | 108-000-000-594-76-63-02 | Regional Ramstead Park Project | $3,363.02 |
| | | **Total 36787** | | | **$3,363.02** |
| | **Total 37949** | | | | **$3,363.02** |
| **Total Reichhardt & Ebe Engineering Inc.** | | | | | **$3,363.02** |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| **Stremler Gravel, Inc** | | | | | |
| | **37950** | | **2026 - May - 2nd Council** | | |
| | | **1357 PR02** | | | |
| | | | 001-000-000-525-30-30-00 | Disaster Recovery | $16,361.81 |
| | | **Total 1357 PR02** | | | **$16,361.81** |
| | **Total 37950** | | | | **$16,361.81** |
| **Total Stremler Gravel, Inc** | | | | | **$16,361.81** |
| | | | | | |
| **Technical Systems Inc.** | | | | | |
| | **37951** | | **2026 - May - 2nd Council** | | |
| | | **26027-002** | | | |
| | | | 401-000-000-535-80-41-00 | Sewer Professional Services | $334.56 |
| | | | 401-000-000-535-80-41-01 | WWTP Professional Services | $334.57 |
| | | **Total 26027-002** | | | **$669.13** |
| | **Total 37951** | | | | **$669.13** |
| **Total Technical Systems Inc.** | | | | | **$669.13** |
| | | | | | |
| **Tjoelker Enterprises, Inc.** | | | | | |
| | **37952** | | **2026 - May - 2nd Council** | | |
| | | **1652** | | | |
| | | | 401-000-000-535-60-41-01 | WWTP Sludge Hauling | $6,912.50 |
| | | **Total 1652** | | | **$6,912.50** |
| | **Total 37952** | | | | **$6,912.50** |
| **Total Tjoelker Enterprises, Inc.** | | | | | **$6,912.50** |
| | | | | | |
| **Vac-Tank Western Services Inc** | | | | | |
| | **37953** | | **2026 - May - 2nd Council** | | |
| | | **2687** | | | |
| | | | 401-000-000-535-60-41-01 | WWTP Sludge Hauling | $10,933.83 |
| | | **Total 2687** | | | **$10,933.83** |
| | **Total 37953** | | | | **$10,933.83** |
| **Total Vac-Tank Western Services Inc** | | | | | **$10,933.83** |
| | | | | | |
| **Valdez Construction Inc** | | | | | |
| | **37954** | | **2026 - May - 2nd Council** | | |
| | | **Everson Flood Repair Application No. 7** | | | |
| | | | 001-000-000-594-59-60-00 | City Hall Remodel- Capital Expenditure | $35,762.72 |
| | | | 001-000-000-594-59-60-01 | City Hall- Flood Mitigation | $633.65 |
| | | | 301-000-000-594-59-60-00 | City Hall Remodel- Streets | $1,349.54 |
| | | | 301-000-000-594-59-60-01 | City Hall- Flood Mitigation-Streets | $23.91 |
| | | | 402-000-000-594-59-60-00 | City Hall Remodel-Capital Expenditure- Water | $5,846.19 |
| | | | 402-000-000-594-59-60-01 | City Hall- Flood Mitigation-Water | $103.58 |
| | | | 403-000-000-594-59-60-00 | City Hall Remodel- Capital Expenditure-Sewer | $5,846.19 |
| | | | 403-000-000-594-59-60-01 | City Hall Remodel- Capital Expenditure-WWTP | $5,176.83 |
| | | | 403-000-000-594-59-60-02 | City Hall- Flood Mitigation- Sewer | $103.58 |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | | | 403-000-000-594-59-60-03 | City Hall- Flood Mitigation- WWTP | $91.72 |
| | | **Total Everson Flood Repair Application No. 7** | | | **$54,937.91** |
| | **Total 37954** | | | | **$54,937.91** |
| **Total Valdez Construction Inc** | | | | | **$54,937.91** |
| | | | | | |
| **Whatcom County Treasurer** | | | | | |
| | **37955** | | **2026 - May - 2nd Council** | | |
| | | **May 2026 Jail Remittance** | | | |
| | | | 001-000-000-525-10-41-00 | What. Co. Emergency Services | $9,152.30 |
| | | **Total May 2026 Jail Remittance** | | | **$9,152.30** |
| | **Total 37955** | | | | **$9,152.30** |
| **Total Whatcom County Treasurer** | | | | | **$9,152.30** |
| | | | | | |
| **Whatcom Humane Society** | | | | | |
| | **37956** | | **2026 - May - 2nd Council** | | |
| | | **2026-1** | | | |
| | | | 001-000-000-554-30-31-00 | Animal Control Expense | $700.00 |
| | | **Total 2026-1** | | | **$700.00** |
| | **Total 37956** | | | | **$700.00** |
| **Total Whatcom Humane Society** | | | | | **$700.00** |
| | | | | | |
| **Ziply Fiber** | | | | | |
| | **37957** | | **2026 - May - 2nd Council** | | |
| | | **Invoice - 5/21/2026 3:09:04 PM** | | | |
| | | | 001-000-000-511-60-42-00 | Telephone/Internet | $14.27 |
| | | | 001-000-000-512-51-42-00 | Telephone/Internet | $14.27 |
| | | | 001-000-000-513-10-42-00 | Telephone/Internet | $14.27 |
| | | | 001-000-000-514-23-42-00 | Telephone/Internet | $14.25 |
| | | | 001-000-000-518-30-42-00 | Telephones/Internet | $14.25 |
| | | | 001-000-000-521-50-42-00 | Telephones/Internet | $14.25 |
| | | | 001-000-000-524-10-42-00 | Telephone/Internet | $14.25 |
| | | | 001-000-000-558-60-42-00 | Telephone/Internet | $14.25 |
| | | | 001-000-000-576-80-42-00 | Park Telephone/Internet | $14.25 |
| | | | 101-000-000-543-30-42-00 | Telephones/Internet | $14.25 |
| | | | 401-000-000-534-80-42-00 | Water Telephone/Internet Services | $14.25 |
| | | | 401-000-000-535-80-42-00 | Sewer Telephone/Internet | $14.25 |

| Vendor | Number | Reference | Account Number | Description | Amount |
|---|---|---|---|---|---|
| | | | 401-000-000-535-80-42-01 | WWTP Telephone/Internet | $14.23 |
| | | **Total Invoice - 5/21/2026 3:09:04 PM** | | | **$185.29** |
| | **Total 37957** | | | | **$185.29** |
| **Total Ziply Fiber** | | | | | **$185.29** |
| **Grand Total** | | **Vendor Count** | **28** | | **$339,137.43** |