



## **MEETING MINUTES FOR PUBLIC HEARING & REGULAR COUNCIL MEETING**

**Council Chambers – 1300 First Street**

**July 15, 2026 at 6:00 PM**

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**PUBLIC HEARING** – Chief Golding with the Aberdeen Fire Department does presentation on the EMS Rate Increase for citizens

### **FLAG SALUTE - PLEDGE OF ALLEGIANCE**

### **CALL TO ORDER - ROLL CALL**

Mayor Springer calls the meeting to order; Councilmember Skinner takes Roll Call.

**PRESENT:** Councilmember Kim Skinner, Councilmember Justin Spargo Councilmember Steve Davis, Councilmember Sue Darcy

**ABSENT:** Councilmember Jeremy Winn; Councilmember Davis moves to excuse Councilmember Winn's absence, Councilmember Skinner seconds.  
Motion passes

### **APPROVAL OF AGENDA**

Councilmember Darcy moves to approve the agenda; Councilmember Skinner seconded.  
Motion passed unanimously.

### **CONSENT AGENDA**

Councilmember Skinner moves to approve the consent agenda; Councilmember Darcy seconded.  
Discussion: Councilmember Davis states he would like to get the information included in the agenda packet earlier for review.

Ayes; 4

Nays; 1

Motion passes

**COUNCIL COMMENTS** – Councilmember Davis would like the council to consider bringing forward a Policy and Procedure Committee, he requests this be added to next months Agenda.

### **COMMITTEE REPORTS**

**Auditing & Finance** – Councilmember Darcy reviewed vouchers with no concerns reported.

**Parks** – Councilmember Spargo reports of new play structure installed at Lions Park, a clean-up party at Highlands Park, and Public Works keeping up with growing grass and weeds in the community.

**Public Safety** – Councilmember Skinner reports they are still working on the Traffic Calming Plan and that Chief Green will report on data from the Speed Radars installed earlier this year. Councilmember Davis reports on discussion about the Cosmo property and what is currently happening there.

**Public Works** – Councilmember Darcy reports Public Works helped get the Lions Park ready for the installation of the playground equipment, they've been busy with summer work keeping up with mowing and weeding and cleaning up the main streets.

## **CITY OFFICIAL REPORTS**

**Clerk/Treasurer** – No report.

**Police Chief Report** – Chief Green reports there has been an increase in calls mostly relating to animals, parks, and vehicles. Out of the 10 cars cited only 1 had to be impounded. He reported on the data gathered from the speed radar signs. Aberdeen VIPS contributed 145.5 hours of service between the City of Aberdeen and City of Cosmopolis. National Night Out is coming up, Chief states if anyone is interested and would like your neighborhood included in the event to contact Ross Lampky in Aberdeen.

**Fire Chief Report** – Chief Coker reports there has been a total of 178 calls for service so far in 2026. 2 members will be attending Fire 2 Academy; both members are excited to serve the community better.

**MAYOR'S REPORT** – Mayor Springer gives reminder of Festival in the Park happening August 23<sup>rd</sup>, at Lions Club Park. The city is still accepting vendor applications and welcome citizens to spread the word. She gives a special thank you to Fire Chief Jacob Coker who will be finishing his career as Fire Chief of Cosmopolis at the end of July. She gives further information on continuing meetings with the Department of Ecology and the EPA on the status at the Cosmo Mill site.

## **NEW BUSINESS DISCUSSION**

1. **Mid-Year Budget Presentation, Tara Dunford; CPA** – Tara gives full presentation on current budget status.
2. **2026 Budget Amendment – First Reading Ordinance No. 1405** – Tara gives detail on this Ordinance and the different items included in this amendment to the 2026 Budget.
3. **2026-2028 Emergency Medical Services Agreement** – Councilmember Davis states that he feels the rate should stay at the 80% rather than the 100%. Disagrees with verbiage in the contract under 2.2 on billing and believes according to their scope of work there is no real guarantee that Aberdeen will respond because their first due is their city and because of that the 80% rate makes more sense to him. Chief Golding makes clarification that they cannot cherry pick calls, response is in the order of call received, regardless of location. Councilmember Spargo questions if

Cosmopolis Volunteer Fire Department can increase their response percentage what would be the process to decrease the rate, Chief Golding says if that were the case they would be able to look at the contract and begin the process of curtailing that. Further discussion with Fire Chief Coker and Councilmember Spargo on response within the city and the difficulty of 24/7 coverage with volunteer time on/off as well as budgeting regarding paying Aberdeen and potential of subsidizing these fees with the Fire budget. Councilmember Spargo has questions for Tara regarding the potential of subsidizing.

4. **Resolution 2026-01 – Setting the date for Public Hearing on Petition to Vacate Alley ROW** – Building Inspector Bill Sidor asks council to approve setting this hearing date for the Public Hearing on vacating the Alley ROW adjacent to Lots 1-20, blk 49, Ruel Nims additions to the City of Cosmopolis.
5. **Sealink Franchise Agreement** – Councilmember Darcy states there was a Council of Governments meeting that her and the mayor had the opportunity to speak with the Mayor of Westport at regarding the project being completed out there. She says the Mayor of Westport had no problems with subcontractors that did their work, and the project went smoothly as a whole.
6. **Part-time City Administrator Position Information** – Mayor Springer informed the Council that she is appointing an interim part-time City Administrator, Jon Martin to the City of Cosmopolis. Councilmember Darcy gave her thoughts on the appointment and her support on this. Mayor Springer gives further information on why this position is a priority and states he will begin work next week. Further discussion amongst Councilmembers, Tara Dunford, and Attorney Chris Coker on moving forward with this position and the process of setting this position, either through Ordinance or Budget Amendment.

#### **PUBLIC COMMENTS – No comments.**

#### **NEW BUSINESS – Council Action**

1. **Vote to Approve the 2026-2028 Emergency Medical Services Agreement with Aberdeen** – Councilmember Skinner moves to Approve the Agreement, Councilmember Darcy seconded.  
*Discussion:* Councilmember Spargo believes the Council should look into areas of how to help citizens with this rate, so it is not the full 100% match. Councilmember Darcy agrees that the Public Safety Committee and Finance Committee can schedule a meeting to discuss ideas for this. Councilmember Skinner asks Chief Golding, who in Aberdeen creates the rates and decides how much Cosmopolis should be paying, he responds that multiple people are involved in the decision. Chief Golding refers Councilmember Skinner to the City Administrator to collaborate in the future.  
Motion passed unanimously
2. **Vote to Approve Resolution 2026-01 – Public Hearing on Petition to Vacate Alley ROW** – Councilmember Davis moves to Approve Resolution 2026-01, Councilmember Skinner seconded.  
Motion passed unanimously
3. **Vote to Approve Sealink Franchise Agreement** – Councilmember Darcy moves to Approve the Sealink Franchise Agreement, Councilmember Skinner seconded.  
*Discussion:* Councilmember Spargo states that fiber optics are cheap to install, but expensive to repair. He believes the installation is putting the citizens at financial risk if any of these cables

*are damaged, and that it would bankrupt the citizen involved in the damage or business loss if a business owner happens to cause damage.*

Ayes; 4

Nays; 1

Motion passes

**PUBLIC COMMENTS – No comments.**

**COUNCIL COMMENTS** – Councilmember Spargo comments that Traffic Calming measures will soon be taking place, he refers to Mayor Springer potentially applying for grants if there are any available. He is aware there are multiple areas that need crosswalks added or repainted, they have made a list of high impact areas to focus on first. Moving forward they will continue compiling a list of areas to work on for both stop lines and crosswalks. He adds of the speed limit changes near Highland Park to be brought to the next Council meeting. Councilmember Davis comments on his support for bringing in the Part-Time City Administrator as soon as possible. Councilmember Darcy adds she believes Jon Martin will be a great asset to our community.

**Councilmember Davis moves to Adjourn the meeting; Councilmember Darcy seconded.**

**Meeting adjourned at 8:32PM.**

***\*\*Meeting recording available at [www.cosmopoliswa.gov](http://www.cosmopoliswa.gov)\*\****

**CITY OF COSMOPOLIS**  
**RESOLUTION NO. 2026-02 (EMS Fee)**

A RESOLUTION increasing the EMS Fee charged on utility accounts; and creating an effective date.

WHEREAS, the City Council adopted Resolution No. 2023-04, setting the EMS fee on utility accounts;

WHEREAS, the City Council has recognized a need to increase the EMS fee charged to utility accounts; NOW THEREFORE,

**BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF COSMOPOLIS, WASHINGTON, IN REGULAR MEETING DULY ASSEMBLED, AS FOLLOWS:**

**SECTION 1.** The monthly EMS Fee shall be \$67.54 per account.

**SECTION 2.** This resolution shall be effective on August 5, 2026.

PASSED AND APPROVED this 5<sup>th</sup> day of August, 2026.

\_\_\_\_\_  
Mayor

Attest:

\_\_\_\_\_  
City Clerk

**COUNTEROFFER ADDENDUM  
TO REAL ESTATE PURCHASE AND SALE AGREEMENT**

All terms and conditions of the offer (Real Estate Purchase and Sale Agreement) dated July 13, 2026 , 1  
concerning 1312 1st Street Cosmopolis WA 98537 (the "Property"), 2  
Address City State Zip  
by David Malik , as Buyer 3  
and the undersigned City of Cosmopolis , as Seller 4  
are accepted, except for the following changes. 5

☒ **The Purchase Price** shall be \$ 76,000.00 Seventy-six thousand dollars 6  
\_\_\_\_\_ 7

☒ **Other.** 8  
**Seller's counter offer subject to City Council approval.** 9

**Seller maintains the right to approve or disapprove of Buyer's intended initial use of the property. If disapproved by Council (whether city Council or legal Council), Buyer's earnest money will be refunded to the Buyer.** 10  
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This counteroffer shall expire at 9:00 p.m. on 7/23/26 (if not filled in, two days after it is delivered), 27  
unless it is sooner withdrawn. Acceptance shall not be effective until a signed copy is received by the counterofferor, 28  
their broker or at the licensed office of their broker. If this counteroffer is not so accepted, it shall lapse and the 29  
Earnest Money shall be refunded to Buyer. 30

**All other terms and conditions of the above offer are incorporated herein by reference as though fully set forth.** 31

Linda Springer 07/21/26  
Signature Date Signature Date

The above counteroffer is accepted.  
David Malik 07/23/26  
Signature Date Signature Date

Form 25  
Vacant Land PSA  
Rev. 2/26  
Page 1 of 6

**VACANT LAND PURCHASE AND SALE AGREEMENT**  
Specific Terms

©Copyright 2026  
Northwest Multiple Listing Service  
ALL RIGHTS RESERVED

1. **Date:** July 13, 2026 **MLS No.:** 2494862 **Offer Expiration Date:** 7/16/2026
2. **Buyer:** David Malik  
Buyer Buyer Status
3. **Seller:** City of Cosmopolis  
Seller Seller
4. **Property:** Legal Description attached as Exhibit A. Tax Parcel No(s): 031002400100, \_\_\_\_\_, \_\_\_\_\_  
1312 1st Street Cosmopolis Grays Harbor WA 98537  
Address City County State Zip
5. **Purchase Price:** \$ ~~65,500.00~~ Sixty-Five Thousand Five Hundred See Counteroffer U.S. Dollars
6. **Earnest Money:** \$ 3,500.00 U.S. Dollars; Delivery Date 3 days after mutual acceptance  
To be held by ☐ Buyer Brokerage Firm; ☒ Closing Agent; ☐ In the form of a Promissory Note (included as an Addendum)
7. **Default:** (check only one) ☒ Forfeiture of Earnest Money; ☐ Seller's Election of Remedies
8. **Title Insurance Company:** Coast Title and Escrow
9. **Closing Agent:** Coast Title and Escrow  
Company Individual (optional)
10. **Closing Date:** 8/28/2026; **Possession Date:** ☒ on Closing; ☐ Other \_\_\_\_\_
11. **Services of Closing Agent for Payment of Utilities:** ☐ Requested (attach NWMLS Form 22K); ☒ Waived
12. **Charges/Assessments Levied Before but Due After Closing:** ☐ assumed by Buyer; ☒ prepaid in full by Seller at Closing
13. **Seller Citizenship (FIRPTA):** Seller ☐ is; ☒ is not a foreign person for purposes of U.S. income taxation
14. **Subdivision:** The Property: ☐ must be subdivided before \_\_\_\_\_; ☒ is not required to be subdivided
15. **Feasibility Contingency:** ☒ Expires 30 days after mutual acceptance; ☐ Satisfied/Waived
16. **Information Verification Period:** ☐ Expires \_\_\_\_\_ days after mutual acceptance; ☒ Satisfied/Waived
17. **Agency Disclosure:** Buyer represented by: ☒ Buyer Broker; ☐ Buyer/Listing Broker (limited dual agent); ☐ unrepresented  
Seller represented by: ☐ Listing Broker; ☒ Listing/Buyer Broker (limited dual agent); ☐ unrepresented
18. **Buyer Brokerage Compensation:** % 3.5 ; 3.5% ☐ Addendum for Buyer Credit  
(a) Seller's Offer (if any) (b) Amount to be Paid by Seller
19. **Addenda:** 35F(Feasibility)

Authentisign  
David Malik 07/13/2026  
Buyer Signature Date  
Buyer Signature Date  
David malik  
Buyer Address  
Kent wa  
City, State, Zip  
Kent wa  
Buyer Phone No. Fax No.  
malikd@outlook.com  
Buyer E-mail Address  
**Premier Realty Grays Harbor** **9907**  
Buyer Brokerage Firm MLS Office No.  
**Dawn Huntsman** **152603**  
Buyer Broker (Print) MLS LAG No.  
**(360) 533-1900** **3605003802** **(360) 533-1909**  
Firm Phone No. Broker Phone No. Firm Fax No.  
harleyg@pr-gh.com  
Firm Document E-mail Address  
dawnh@pr-gh.com  
Buyer Broker E-mail Address  
**24035811** **2296**  
Buyer Broker DOL License No. Firm DOL License No.

Seller Signature Date  
Seller Signature Date  
Seller Address  
City, State, Zip  
Seller Phone No. Fax No.  
Seller E-mail Address  
**Premier Realty Grays Harbor** **9907**  
Listing Brokerage Firm MLS Office No.  
**Harley Greninger** **10818**  
Listing Broker (Print) MLS LAG No.  
**(360) 533-1900** **(360) 580-7273** **(360) 533-1909**  
Firm Phone No. Broker Phone No. Firm Fax No.  
harleyg@pr-gh.com  
Firm Document E-mail Address  
harleyg@pr-gh.com  
Listing Broker E-mail Address  
**2750** **2296**  
Listing Broker DOL License No. Firm DOL License No.

Form 25  
Vacant Land PSA  
Rev. 2/26  
Page 2 of 6

**VACANT LAND PURCHASE AND SALE AGREEMENT**  
General Terms

©Copyright 2026  
Northwest Multiple Listing Service  
ALL RIGHTS RESERVED

- a. Purchase Price.** Buyer shall pay to Seller the Purchase Price, including the Earnest Money, in cash at Closing, unless otherwise specified in this Agreement. Buyer represents that Buyer has sufficient funds to close this sale in accordance with this Agreement and is not relying on any contingent source of funds, including funds from loans, the sale of other property, gifts, retirement, or future earnings, except to the extent otherwise specified in this Agreement. The parties shall use caution when wiring funds to avoid potential wire fraud. Before wiring funds, the party wiring funds shall take steps to confirm any wire instructions via an independently verified phone number and other appropriate measures.
- b. Earnest Money.** Buyer shall deliver the Earnest Money by the Delivery Date listed in Specific Term No. 6 (2 days after mutual acceptance if not filled in) to the party holding the Earnest Money (Buyer Brokerage Firm or Closing Agent). If sent by mail, the Earnest Money must arrive at Buyer Brokerage Firm or Closing Agent by the Delivery Date. If the Earnest Money is held by Buyer Brokerage Firm and is over \$10,000.00 it shall be deposited into an interest bearing trust account in Buyer Brokerage Firm's name provided that Buyer completes an IRS Form W-9. Interest, if any, after deduction of bank charges and fees, will be paid to Buyer. Buyer shall reimburse Buyer Brokerage Firm for bank charges and fees in excess of the interest earned, if any. If the Earnest Money held by Buyer Brokerage Firm is over \$10,000.00 Buyer has the option to require Buyer Brokerage Firm to deposit the Earnest Money into the Housing Trust Fund Account, with the interest paid to the State Treasurer, if both Seller and Buyer so agree in writing. If Buyer does not complete an IRS Form W-9 before Buyer Brokerage Firm must deposit the Earnest Money or the Earnest Money is \$10,000.00 or less, the Earnest Money shall be deposited into the Housing Trust Fund Account. Buyer Brokerage Firm may transfer the Earnest Money to Closing Agent at Closing. If all or part of the Earnest Money is to be refunded to Buyer and any such costs remain unpaid, the Buyer Brokerage Firm or Closing Agent may deduct and pay them therefrom. The parties instruct Closing Agent to provide written verification of receipt of the Earnest Money and notice of dishonor of any check to the parties and Brokers at the addresses and/or fax numbers provided herein.
- Upon termination of this Agreement, a party or the Closing Agent may deliver a form authorizing the release of Earnest Money to the other party or the parties. The party(s) shall execute such form and deliver the same to the Closing Agent. If either party fails to execute the release form, a party may make a written demand to the Closing Agent for the Earnest Money. Pursuant to RCW 64.04.220, Closing Agent shall deliver notice of the demand to the other party within 15 days. If the other party does not object to the demand within 20 days of Closing Agent's notice, Closing Agent shall disburse the Earnest Money to the party making the demand within 10 days of the expiration of the 20 day period. If Closing Agent timely receives an objection or an inconsistent demand from the other party, Closing Agent shall commence an interpleader action within 60 days of such objection or inconsistent demand, unless the parties provide subsequent consistent instructions to Closing Agent to (i) disburse the earnest money or (ii) refrain from commencing an interpleader action for a specified period of time. Pursuant to RCW 4.28.080, the parties consent to service of the summons and complaint for an interpleader action by first class mail, postage prepaid at the party's usual mailing address or the address identified in this Agreement. If the Closing Agent complies with the preceding process, each party shall be deemed to have released Closing Agent from any and all claims or liability related to the disbursement of the Earnest Money. If either party fails to authorize the release of the Earnest Money to the other party when required to do so under this Agreement, that party shall be in breach of this Agreement. For the purposes of this section, the term Closing Agent includes a Buyer Brokerage Firm holding the Earnest Money. The parties authorize the party commencing an interpleader action to deduct up to \$750.00 for the costs thereof. The parties acknowledge that RCW 64.04.220 requires the court to award the Closing Agent its reasonable attorneys' fees and costs associated with an interpleader action.
- c. Condition of Title.** Unless otherwise specified in this Agreement, title to the Property shall be marketable at Closing. The following shall not cause the title to be unmarketable: rights, reservations, covenants, conditions and restrictions, presently of record and general to the area; easements and encroachments, not materially affecting the value of or unduly interfering with Buyer's reasonable use of the Property; and reserved oil and/or mining rights. Seller shall not convey or reserve any oil and/or mineral rights after mutual acceptance without Buyer's written consent. Monetary encumbrances or liens not assumed by Buyer, shall be paid or discharged by Seller on or before Closing. Title shall be conveyed by a Statutory Warranty Deed. If this Agreement is for conveyance of a buyer's interest in a Real Estate Contract, the Statutory Warranty Deed shall include a buyer's assignment of the contract sufficient to convey after acquired title. If the Property has been short platted, the Short Plat number is in the Legal Description.
- d. Title Insurance.** Seller authorizes Buyer's lender or Closing Agent, at Seller's expense, to apply for the then-current ALTA form of standard form owner's policy of title insurance from the Title Insurance Company. If Seller previously received a preliminary commitment from a Title Insurance Company that Buyer declines to use, Buyer shall pay any cancellation fees owing to the original Title Insurance Company. Otherwise, the party applying for title insurance shall pay any title cancellation fee, in the event such a fee is assessed. The Title Insurance Company shall send a copy of the preliminary commitment to Seller, Listing Broker, Buyer and Buyer Broker. The preliminary commitment, and the title policy to be issued, shall contain no exceptions other than the General Exclusions and Exceptions in said standard form and Special Exceptions consistent with the Condition of Title herein provided. If title cannot be made so insurable prior

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07/13/2026

Buyer's Initials

Date

Buyer's Initials

Date

Seller's Initials

Date

Seller's Initials

Date

**VACANT LAND PURCHASE AND SALE AGREEMENT**  
General Terms

to the Closing Date, then as Buyer's sole and exclusive remedy, the Earnest Money shall, unless Buyer elects to waive such defects or encumbrances, be refunded to Buyer, less any unpaid costs described in this Agreement, and this Agreement shall thereupon be terminated. Buyer shall have no right to specific performance or damages as a consequence of Seller's inability to provide insurable title.

**e. Closing and Possession.** This sale shall be closed by the Closing Agent on the Closing Date. "Closing" means the date on which all documents are recorded and the sale proceeds are available to Seller. If the Closing Date falls on a Saturday, Sunday, legal holiday as defined in RCW 1.16.050, or day when the county recording office is closed, the Closing Agent shall close the transaction on the next day that is not a Saturday, Sunday, legal holiday, or day when the county recording office is closed. Buyer shall be entitled to possession at 9:00 p.m. on the Possession Date. Seller shall maintain the Property in its present condition, normal wear and tear excepted, until Buyer is provided possession. Buyer reserves the right to walk through the Property within 5 days of Closing to verify that Seller has maintained the Property as required by this paragraph. Seller shall not enter into or modify existing leases or rental agreements, service contracts, or other agreements affecting the Property which have terms extending beyond Closing without first obtaining Buyer's consent, which shall not be unreasonably withheld.

**f. Section 1031 Like-Kind Exchange.** If either Buyer or Seller intends for this transaction to be a part of a Section 1031 like-kind exchange, then the other party shall cooperate in the completion of the like-kind exchange so long as the cooperating party incurs no additional liability in doing so, and so long as any expenses (including attorneys' fees and costs) incurred by the cooperating party that are related only to the exchange are paid or reimbursed to the cooperating party at or prior to Closing. Notwithstanding the Assignment paragraph of this Agreement, any party completing a Section 1031 like-kind exchange may assign this Agreement to its qualified intermediary or any entity set up for the purposes of completing a reverse exchange.

**g. Closing Costs and Prorations and Charges and Assessments.** Seller and Buyer shall each pay one-half of the escrow fee unless otherwise required by applicable FHA or VA regulations. Taxes for the current year, rent, interest, and lienable homeowner's association dues shall be prorated as of Closing. Buyer shall pay Buyer's loan costs, including credit report, appraisal charge and lender's title insurance, unless provided otherwise in this Agreement. If any payments are delinquent on encumbrances which will remain after Closing, Closing Agent is instructed to pay such delinquencies at Closing from money due, or to be paid by, Seller. Buyer shall pay for remaining fuel in the fuel tank if, prior to Closing, Seller obtains a written statement from the supplier as to the quantity and current price and provides such statement to the Closing Agent. Seller shall pay all utility charges, including unbilled charges. Unless waived in Specific Term No. 11, Seller and Buyer request the services of Closing Agent in disbursing funds necessary to satisfy unpaid utility charges in accordance with RCW 60.80 and Seller shall provide the names and addresses of all utilities providing service to the Property and having lien rights (attach NWMLS Form 22K Identification of Utilities or equivalent).

Buyer is advised to verify the existence and amount of any local improvement district, capacity or impact charges or other assessments that may be charged against the Property before or after Closing. Seller will pay such charges that are or become due on or before Closing. Charges levied before Closing, but becoming due after Closing shall be paid as agreed in Specific Term No.12.

**h. Sale Information.** Listing Broker and Buyer Broker are authorized to report this Agreement (including price and all terms) to the Multiple Listing Service that published it and to its members, financing institutions, appraisers, and anyone else related to this sale. Buyer and Seller expressly authorize all Closing Agents, appraisers, title insurance companies, and others related to this Sale, to furnish the Listing Broker and/or Buyer Broker, on request, any and all information and copies of documents concerning this sale.

**i. Seller Citizenship and FIRPTA.** Seller warrants that the identification of Seller's citizenship status for purposes of U.S. income taxation in Specific Term No. 13 is correct. Seller shall execute a certification (NWMLS Form 22E or equivalent) under the Foreign Investment In Real Property Tax Act ("FIRPTA") and provide the certification to the Closing Agent within 10 days of mutual acceptance. If Seller is a foreign person for purposes of U.S. income taxation, and this transaction is not otherwise exempt from FIRPTA, Closing Agent is instructed to withhold and pay the required amount to the Internal Revenue Service. Seller shall pay any fees incurred by Buyer related to such withholding and payment.

If Seller fails to provide the FIRPTA certification to the Closing Agent within 10 days of mutual acceptance, Buyer may give notice that Buyer may terminate the Agreement at any time 3 days thereafter (the "Right to Terminate Notice"). If Seller has not earlier provided the FIRPTA certification to the Closing Agent, Buyer may give notice of termination of this Agreement (the "Termination Notice") any time following 3 days after delivery of the Right to Terminate Notice. If Buyer gives the Termination Notice before Seller provides the FIRPTA certification to the Closing Agent, this Agreement is terminated and the Earnest Money shall be refunded to Buyer.

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07/13/2026

Buyer's Initials

Date

Buyer's Initials

Date

Seller's Initials

Date

Seller's Initials

Date

**VACANT LAND PURCHASE AND SALE AGREEMENT**  
General Terms

- j. Notices and Delivery of Documents.** Any notice related to this Agreement (including revocations of offers or counteroffers) must be in writing. Notices to Seller must be signed by at least one Buyer and shall be deemed delivered only when the notice is received by Seller, by Listing Broker, or at the licensed office of Listing Broker. Notices to Buyer must be signed by at least one Seller and shall be deemed delivered only when the notice is received by Buyer, by Buyer Broker, or at the licensed office of Buyer Broker. Documents related to this Agreement, such as NWMLS Form 17C, Information on Lead-Based Paint and Lead-Based Paint Hazards, Public Offering Statement or Resale Certificate, and all other documents shall be delivered pursuant to this paragraph. Buyer and Seller must keep Buyer Broker and Listing Broker advised of their whereabouts in order to receive prompt notification of receipt of a notice.
- Facsimile transmission of any notice or document shall constitute delivery. E-mail transmission of any notice or document (or a direct link to such notice or document) shall constitute delivery when: (i) the e-mail is sent to both Buyer Broker and Buyer Brokerage Firm or both Listing Broker and Listing Brokerage Firm at the e-mail addresses specified on page one of this Agreement; (ii) Buyer Broker or Listing Broker provide written acknowledgment of receipt of the e-mail (an automatic e-mail reply does not constitute written acknowledgment); or (iii) if a party is unrepresented, the e-mail is sent directly to the party's e-mail address specified on page one of this Agreement. At the request of either party, or the Closing Agent, the parties will confirm facsimile or e-mail transmitted signatures by signing an original document.
- k. Computation of Time.** Unless otherwise specified in this Agreement, any period of time measured in days and stated in this Agreement shall start on the day following the event commencing the period and shall expire at 9:00 p.m. of the last calendar day of the specified period of time. Except for the Possession Date, if the last day is a Saturday, Sunday or legal holiday as defined in RCW 1.16.050, the specified period of time shall expire on the next day that is not a Saturday, Sunday or legal holiday. Any specified period of 5 days or less, except for any time period relating to the Possession Date, shall not include Saturdays, Sundays or legal holidays. If the parties agree that an event will occur on a specific calendar date, the event shall occur on that date, except for the Closing Date, which, if it falls on a Saturday, Sunday, legal holiday as defined in RCW 1.16.050, or day when the county recording office is closed, shall occur on the next day that is not a Saturday, Sunday, legal holiday, or day when the county recording office is closed. When counting backwards from Closing, any period of time measured in days shall start on the day prior to Closing and if the last day is a Saturday, Sunday or legal holiday as defined in RCW 1.16.050, the specified period of time shall expire on the next day, moving forward, that is not a Saturday, Sunday or legal holiday (e.g. Monday or Tuesday). If the parties agree upon and attach a legal description after this Agreement is signed by the offeree and delivered to the offeror, then for the purposes of computing time, mutual acceptance shall be deemed to be on the date of delivery of an accepted offer or counteroffer to the offeror, rather than on the date the legal description is attached. Time is of the essence of this Agreement.
- l. Integration and Electronic Signatures.** This Agreement constitutes the entire understanding between the parties and supersedes all prior or contemporaneous understandings and representations. No modification of this Agreement shall be effective unless agreed in writing and signed by Buyer and Seller. The parties acknowledge that a signature in electronic form has the same legal effect and validity as a handwritten signature.
- m. Assignment.** Buyer may not assign this Agreement, or Buyer's rights hereunder, without Seller's prior written consent, unless the parties indicate that assignment is permitted by the addition of "and/or assigns" on the line identifying the Buyer on the first page of this Agreement.
- n. Default.** In the event Buyer fails, without legal excuse, to complete the purchase of the Property, then the following provision, as identified in Specific Term No. 7, shall apply:
- i. Forfeiture of Earnest Money.** That portion of the Earnest Money that does not exceed five percent (5%) of the Purchase Price shall be forfeited to the Seller as the sole and exclusive remedy available to Seller for such failure.
- ii. Seller's Election of Remedies.** Seller may, at Seller's option, (a) keep the Earnest Money as liquidated damages as the sole and exclusive remedy available to Seller for such failure, (b) bring suit against Buyer for Seller's actual damages, (c) bring suit to specifically enforce this Agreement and recover any incidental damages, or (d) pursue any other rights or remedies available at law or equity.
- o. Professional Advice and Attorneys' Fees.** Buyer and Seller are advised to seek the counsel of an attorney and a certified public accountant to review the terms of this Agreement. Buyer and Seller shall pay their own fees incurred for such review. However, if Buyer or Seller institutes suit against the other concerning this Agreement, or if the party holding the Earnest Money commences an interpleader action, the prevailing party is entitled to reasonable attorneys' fees and expenses.
- p. Offer.** This offer must be accepted by 9:00 p.m. on the Offer Expiration Date, unless sooner withdrawn. Acceptance shall not be effective until a signed copy is received by the other party, by the other party's broker, or at the licensed

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07/13/2026

Buyer's Initials

Date

Buyer's Initials

Date

Seller's Initials

Date

Seller's Initials

Date

**VACANT LAND PURCHASE AND SALE AGREEMENT**  
General Terms

- office of the other party's broker pursuant to General Term j. If this offer is not so accepted, it shall lapse and any Earnest Money shall be refunded to Buyer. 162 163
- q. Counteroffer.** Any change in the terms presented in an offer or counteroffer, other than the insertion of or change to Seller's name and Seller's warranty of citizenship status, shall be considered a counteroffer. If a party makes a counteroffer, then the other party shall have until 9:00 p.m. on the counteroffer expiration date to accept that counteroffer, unless sooner withdrawn. Acceptance shall not be effective until a signed copy is received by the other party, the other party's broker, or at the licensed office of the other party's broker pursuant to General Term j. If the counteroffer is not so accepted, it shall lapse and any Earnest Money shall be refunded to Buyer. 164 165 166 167 168 169
- r. Offer and Counteroffer Expiration Date.** If no expiration date is specified for an offer/counteroffer, the offer/counteroffer shall expire 2 days after the offer/counteroffer is delivered by the party making the offer/counteroffer, unless sooner withdrawn. 170 171 172
- s. Agency Disclosure.** Buyer Brokerage Firm, Buyer Brokerage Firm's Designated Broker, Buyer Broker's Branch Manager (if any) and Buyer Broker's Managing Broker (if any) represent the same party that Buyer Broker represents. Listing Brokerage Firm, Listing Brokerage Firm's Designated Broker, Listing Broker's Branch Manager (if any), and Listing Broker's Managing Broker (if any) represent the same party that the Listing Broker represents. All parties acknowledge receipt of the pamphlet entitled "Real Estate Brokerage in Washington." 173 174 175 176 177
- t. Brokerage Firm Compensation.** Seller and Buyer shall pay compensation in accordance with any listing or compensation agreement to which they are a party. The Listing Brokerage Firm's compensation shall be paid as specified in the listing agreement. The compensation offered by Seller to the Buyer Brokerage Firm, if any, is set forth in Specific Term No. 18(a), and if there is any inconsistency between the Buyer Brokerage Firm compensation offered and the description of the offered compensation stated in Specific Term No. 18(a), the terms shall be as set forth in the published offer. Seller shall pay the Buyer Brokerage Firm compensation set forth in Specific Term No. 18(b). Amounts described as a percentage in Specific Term No. 18(a) or 18(b) shall be a percentage of the Purchase Price unless otherwise specified by the parties. Seller and Buyer hereby consent to Listing Brokerage Firm or Buyer Brokerage Firm receiving compensation from more than one party. Seller and Buyer hereby assign to Listing Brokerage Firm and Buyer Brokerage Firm, as applicable, a portion of their funds in escrow equal to such compensation and irrevocably instruct the Closing Agent to disburse the compensation directly to the Firm(s). In any action by Listing or Buyer Brokerage Firm to enforce this paragraph, the prevailing party is entitled to court costs and reasonable attorneys' fees. Seller and Buyer agree that the Firms are intended third-party beneficiaries under this Agreement. 178 179 180 181 182 183 184 185 186 187 188 189 190
- u. Subdivision.** If the Property must be subdivided, Seller represents that there has been preliminary plat approval for the Property and this Agreement is conditioned on the recording of the final plat containing the Property on or before the date specified in Specific Term No. 14. If the final plat is not recorded by such date, this Agreement shall terminate and the Earnest Money shall be refunded to Buyer. 191 192 193 194
- v. Feasibility Contingency.** Unless satisfied/waived, Buyer shall have the time period set forth in Specific Term No. 15 to verify the suitability of the Property for Buyer's intended use, including whether the Property can be platted, developed and/or built on (now or in the future) and what it will cost to do so. Buyer should not rely on any oral statements concerning this made by Seller, Listing Broker or Buyer Broker. Buyer should inquire at the city or county, and water, sewer or other special districts in which the Property is located. Buyer's inquiry should include, but not be limited to: building or development moratoriums applicable to or being considered for the Property; any special building requirements, including setbacks, height limits or restrictions on where buildings may be constructed on the Property; whether the Property is affected by a flood zone, wetlands, shorelands or other environmentally sensitive areas; road, school, fire and any other growth mitigation or impact fees that must be paid; the procedure and length of time necessary to obtain plat approval and/or a building permit; sufficient water, sewer and utility and any service connection charges; and all other charges that must be paid. Buyer and Buyer's agents, representatives, consultants, architects and engineers shall have the right, from time to time during and after the feasibility contingency, to enter onto the Property and to conduct any tests or studies that Buyer may need to ascertain the condition and suitability of the Property for Buyer's intended purpose. Buyer shall restore the Property and all improvements on the Property to the same condition they were in prior to the inspection. Buyer shall be responsible for all damages resulting from any inspection of the Property performed on Buyer's behalf. Seller shall cooperate with Buyer in obtaining permits or other approvals Buyer may reasonably require for Buyer's intended use of the Property; provided that Seller shall not be required to incur any liability or expenses in doing so. If Buyer does not give notice of disapproval on or before the time period set forth in Specific Term No. 15, this feasibility contingency shall conclusively be deemed satisfied. If Buyer gives timely notice of disapproval, then this Agreement shall terminate and the Earnest Money shall be refunded to Buyer. The Feasibility Contingency Addendum (NWMLS Form 35F), if included in the Agreement, supersedes the Feasibility Contingency in Specific Term No. 15 and this General Term v. 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215

 07/13/2026

Buyer's Initials

Date

Buyer's Initials

Date

Seller's Initials

Date

Seller's Initials

Date

VACANT LAND PURCHASE AND SALE AGREEMENT  
General Terms

- w. Information Verification Period.** Unless satisfied/waived, Buyer shall have the time period set forth in Specific Term No.16 (10 days after mutual acceptance if not filled in) to verify all information provided from Seller or Listing Brokerage Firm related to the Property. This contingency shall be deemed satisfied unless Buyer gives notice identifying the materially inaccurate information within the time period set forth in Specific Term No. 16. If Buyer gives timely notice under this section, then this Agreement shall terminate and the Earnest Money shall be refunded to Buyer.
- x. Property Condition Disclaimer.** Buyer and Seller agree, that except as provided in this Agreement, all representations and information regarding the Property and the transaction are solely from Seller or Buyer, and not from any Broker. The parties acknowledge that the Brokers are not responsible for assuring that the parties perform their obligations under this Agreement and that none of the Brokers has agreed to independently investigate or confirm any matter related to this transaction except as stated in this Agreement, or in a separate writing signed by such Broker. Brokers make no representation concerning: (i) the lot size, boundaries, or accuracy of any information provided by Seller; (ii) the square footage of any improvements on the Property; or (iii) whether there are any encroachments (e.g., fences, rockeries, buildings) on the Property, or by the Property on adjacent properties. Buyer is advised to verify lot size, square footage, and encroachments to Buyer's satisfaction. In addition, Brokers do not guarantee the value, quality or condition of the Property and some properties may contain building materials, including siding, roofing, ceiling, insulation, electrical, and plumbing, that have been the subject of lawsuits and/or governmental inquiry because of possible defects or health hazards. Some properties may have other defects arising after construction, such as drainage, leakage, pest, rot and mold problems. In addition, some properties may contain soil or other contamination that is not readily apparent and may be hazardous. Brokers do not have the expertise to identify or assess defective or hazardous products, materials, or conditions. Buyer is urged to use due diligence to inspect the Property to Buyer's satisfaction and to retain inspectors qualified to identify the presence of defective or hazardous materials and conditions and evaluate the Property as there may be defects and hazards that may only be revealed by careful inspection. Buyer is advised to investigate whether the Property is suitable for Buyer's intended use and to ensure the water supply is sufficient to meet Buyer's needs. Buyer is advised to investigate the cost of insurance for the Property, including, but not limited to homeowner's, fire, flood, earthquake, landslide, and other available coverage. Buyer acknowledges that local ordinances may restrict short term rentals of the Property. Brokers may assist the parties with locating and selecting third-party service providers, such as inspectors or contractors, but Brokers cannot guarantee or be responsible for the services provided by those third parties. The parties shall exercise their own judgment and due diligence regarding third-party service providers.
- y. Fair Housing.** Seller and Buyer acknowledge that local, state, and federal fair housing laws prohibit discrimination based on sex, marital status, sexual orientation, gender identity, race, creed, color, religion, caste, national origin, citizenship or immigration status, families with children status, familial status, honorably discharged veteran or military status, the presence of any sensory, mental, or physical disability, or the use of a support or service animal by a person with a disability.
- z. Financial Crimes Enforcement Network (FinCEN) Real Estate Reporting.** Section 1010.821 of Chapter 31 of the Code of Federal Regulations ("Code") requires that certain residential real estate transactions purchased with all cash or without institutional lender financing, where at least one buyer is a legal entity, limited liability company, corporation, partnership, trust, trustee, or other non-natural person, must be reported to the United States Treasury Department's Financial Crimes Enforcement Network ("FinCEN Report").
- If this transaction is subject to the FinCEN Report, then Seller and Buyer shall, no later than Closing, provide to the Closing Agent the information and documentation necessary to enable the Closing Agent to complete the FinCEN Report. Such information and documentation includes the full legal name, date of birth, residential street address, and the IRS taxpayer identification number of the beneficial owners of the Buyer, as further defined and described in the Code. Buyer shall also pay all costs and fees to prepare and file the FinCEN Report.

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Buyer's Initials      Date      Buyer's Initials      Date      Seller's Initials      Date      Seller's Initials      Date

## FEASIBILITY CONTINGENCY ADDENDUM

The following is part of the Purchase and Sale Agreement dated July 13, 2026 1  
between David Malik 2  
Buyer Buyer ("Buyer")  
and City of Cosmopolis 3  
Seller Seller ("Seller")  
concerning 1312 1st Street Cosmopolis WA 98537 (the "Property"). 4  
Address City State Zip

1. **FEASIBILITY CONTINGENCY.** Buyer shall verify within 30 days (20 days if not filled in) after mutual acceptance (the "Feasibility Contingency Expiration Date") the suitability of the Property for Buyer's intended use. This feasibility contingency shall conclusively be deemed waived unless Buyer gives notice of disapproval on or before the Feasibility Contingency Expiration Date. If Buyer gives a timely notice of disapproval, then this Agreement shall terminate and the Earnest Money shall be refunded to Buyer. 5 6 7 8 9
2. **BUYER DUE DILIGENCE.** Buyer should not rely on any oral statements concerning the Property made by the Seller, Listing Broker or Buyer Broker. Buyer should inquire at the city or county, and water, sewer or other special districts in which the Property is located. Buyer's inquiry shall include, but not be limited to: whether the Property can be platted, developed and/or built on (now or in the future) and the related costs; building or development moratoria applicable to or being considered for the Property; any special building requirements, including setbacks, height limits or restrictions on where buildings may be constructed on the Property; whether the Property is affected by a flood zone, wetlands, shorelands or other environmentally sensitive area; road, school, fire and any other growth mitigation or impact fees that must be paid; the procedure and length of time necessary to obtain plat approval and/or a building permit; sufficient water, sewer and utility and any services connection charges; all other charges that must be paid. 10 11 12 13 14 15 16 17 18 19
3. **PROPERTY ACCESS.** Buyer and Buyer's agents, representatives, consultants, architects and engineers shall have the right, from time to time during the feasibility contingency, to enter onto the Property and to conduct any tests or studies that Buyer may need to ascertain the condition and suitability of the Property for Buyer's intended purpose. Buyer shall restore the Property and all improvements on the Property to the same condition they were in prior to the inspection. Buyer shall be responsible for all damages resulting from any inspection of the Property performed on Buyer's behalf. Seller shall cooperate with Buyer in obtaining permits or other approvals Buyer may reasonably require for Buyer's intended use of the Property; provided that Seller shall not be required to incur any liability or expense in doing so. 20 21 22 23 24 25 26 27
4. ☐ **AGREEMENT TERMINATED IF NOTICE OF SATISFACTION NOT TIMELY PROVIDED.** If checked, this Agreement shall terminate and Buyer shall receive a refund of the Earnest Money unless Buyer gives notice to Seller on or before the Feasibility Contingency Expiration Date that the Property is suitable for Buyer's intended purpose. 28 29 30 31

Authentication  
DM

07/13/2026

Buyer's Initials

Date

Buyer's Initials

Date

Seller's Initials

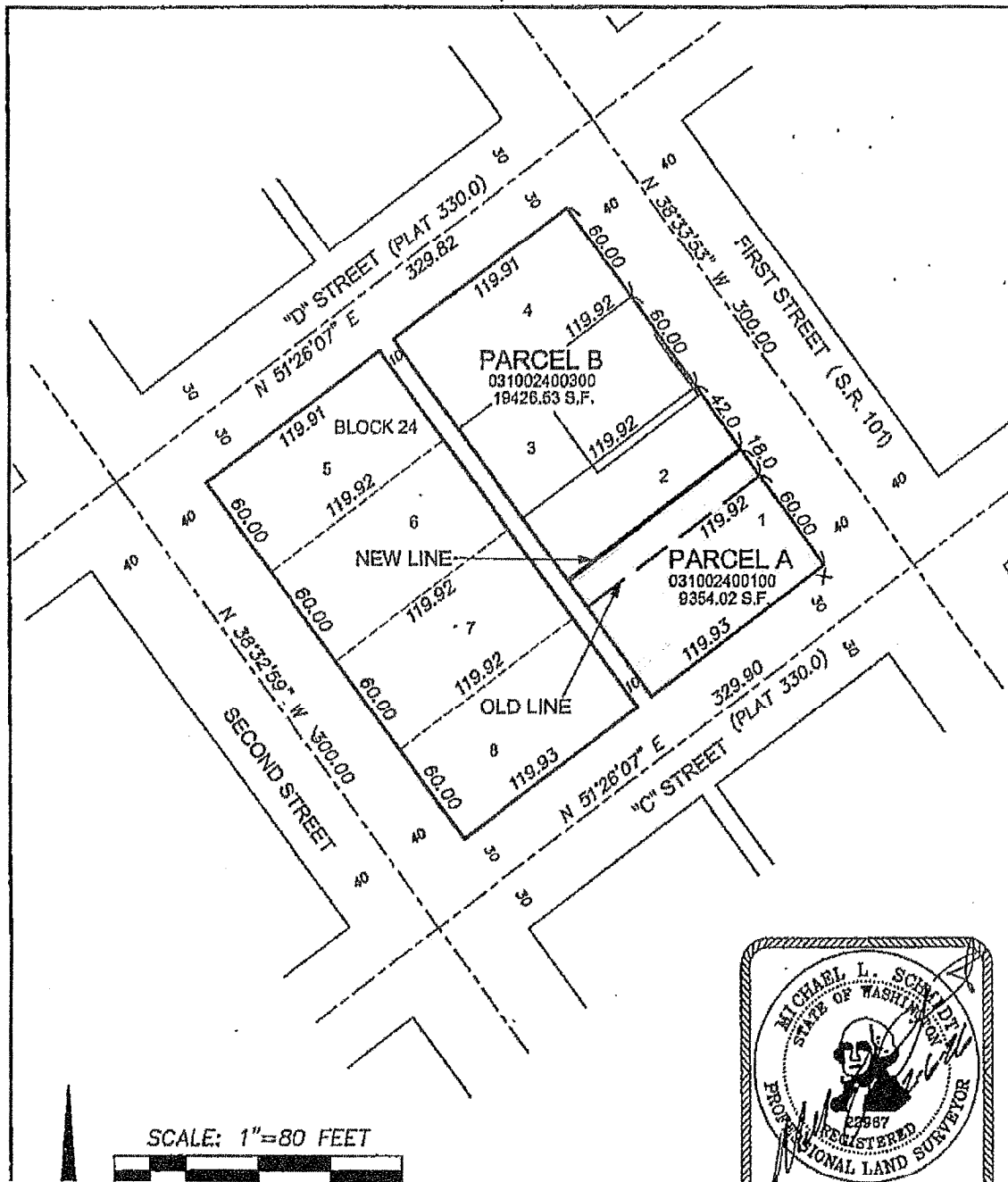
Date

Seller's Initials

Date



07/13/26



## Exhibit A

2026-02180023 02/18/2026 10:59:41 AM Grays Harbor Co, WA Pg. 3 of 6



**BERGLUND, SCHMIDT  
& ASSOCIATES, INC.**  
PROFESSIONAL LAND SURVEYORS

2323 Bay Avenue  
Hoquiam, WA 98530  
(360) 532-7630 • FAX (360) 591-7600  
[www.berglundschmidt.com](http://www.berglundschmidt.com)

February 3, 2026

**LEGAL DESCRIPTION FOR:**

City of Cosmopolis  
P.O. Box 2007  
Cosmopolis, WA. 98537

**Legal Description: New Parcel A**

Lot 1 and the Southeasterly 18.00 feet of Lot 2, Block 24, Corrected Plat of the Town of Cosmopolis, as per plat recorded in Volume 1 of Plats, page 135, records of Grays Harbor County.

Situate in the County of Grays Harbor, State of Washington.



Michael L. Schmidt, PLS NO. 22967

## **ORDINANCE NO. 1406**

### **AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COSMOPOLIS VACATING A PORTION OF THE ALLEY RIGHT-OF-WAY ADJACENT TO LOTS 1 THROUGH 20, BLOCK 49, RUEL NIMS ADDITION TO THE CITY OF COSMOPOLIS, AS PETITIONED BY THE COSMOPOLIS SCHOOL DISTRICT.**

#### **R E C I T A L S:**

WHEREAS, a petition has been filed with the City Clerk to vacate the following described public right-of-way: the alley right-of-way adjacent to Lots 1 through 20, Block 49, Ruel Nims Addition to the City of Cosmopolis; and

WHEREAS, said petition was filed by the Cosmopolis School District, representing the owner(s) of the property abutting the right-of-way to be vacated, and a public hearing has been held on this petition before the City Council as provided by RCW 35.79; and

WHEREAS, the City Council of the City of Cosmopolis has met and concluded that the public use, benefit, and welfare will best be served by the vacation of said alley right-of-way;

NOW, THEREFORE, the City Council of the City of Cosmopolis, Washington do ordain as follows:

#### **Section 1. VACATION. The following described public right-of-way is hereby vacated:**

The alley right-of-way adjacent to Lots 1 through 20, Block 49, Ruel Nims Addition to the City of Cosmopolis, Washington. [Legal description to be confirmed by survey/City Engineer prior to recording.]

Section 2. EASEMENT RESERVED. An easement is hereby reserved and retained over, under, and through the vacated right-of-way for existing and future public utilities, including but not limited to water, sewer, stormwater, electrical, and communication facilities, together with the right of ingress and egress for the purpose of installing, maintaining, repairing, and replacing said utilities. [Confirm with Public Works whether a specific width/location should be specified.]

Section 3. SEVERABILITY. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The Council hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases had been declared invalid or unconstitutional, and if for any reason this Ordinance should be declared invalid or unconstitutional, then the original ordinance or ordinances shall be in full force and effect.

Section 4. EFFECTIVE DATE. This Ordinance shall take effect upon the fifth day following the date of publication.

Section 5. CORRECTIONS. Upon approval of the Mayor and City Attorney, the CFO/City Clerk and the Code Reviser are authorized to make necessary corrections to this ordinance, including the correction of clerical errors, references to other local, state, or federal laws, codes, rules, or regulations, or ordinance number and section/subsection numbering.

**PASSED BY THE CITY COUNCIL OF THE CITY OF COSMOPOLIS, WASHINGTON,  
AT A REGULAR MEETING THEREOF, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2026.**

**CITY OF COSMOPOLIS:**

\_\_\_\_\_  
Linda Springer, Mayor

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Christopher John Coker, City Attorney

**ATTEST/AUTHENTICATED:**

\_\_\_\_\_  
City Clerk, City of Cosmopolis

PUBLISHED: \_\_\_\_\_

**To:** Mayor Linda Springer and City Council Members

**From:** Tara Dunford, CPA

**Date:** July 15, 2026

**Re:** 2026 Budget Amendment #1

**ATTACHMENTS:** Ordinance No. 1405

**TYPE OF ACTION:** None, first read.

**Discussion:**

This proposed budget amendment includes the following:

001 General Fund

Increase expenditures by \$192,115 for museum capital improvements. This is covered entirely by insurance settlements. \$123,263 was received in 2025 and the remaining \$68,852 was received in 2026.

205 2020 UTGO Bond

Increase transfers in by \$242,901 to reflect use of real estate excise tax proceeds to cover remaining shortfall related to City Hall construction expenses. As approved in Comprehensive Plan, adopted by Council on April 15, 2026.

305 Real Estate Excise Tax

Increase transfers out by \$242,901 to reflect use of real estate excise tax proceeds to cover remaining shortfall related to City Hall construction expenses. As approved in Comprehensive Plan, adopted by Council on April 15, 2026.

402 Sewer Fund

Increase intergovernmental services expense by \$273,000 to reflect partial payment made to the City of Aberdeen for prior year sewer services.

FTE Schedule

The position of Police Clerk is removed, and a proposed part-time hourly City Administrator position is added. The original 2026 budget did not reflect dissolution of the Police Department. Net savings in 2026 are approximately \$58,000 (actual expenses less than budget). In 2027, savings related to the Police Department will increase by approximately \$92,000 (leave buyouts, insurance, and other minor expenses incurred in 2026 which will not continue in 2027), for total annualized savings of \$150,000. A part-time City Administrator (24 hours/week) will have a cost of approximately \$75,000. The estimated cost for the remainder of 2026 is \$36,500, assuming a mid-July start date.

## **ORDINANCE NO. 1405**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COSMOPOLIS, MAKING CERTAIN FINDINGS OF FACT AND AMENDING THE 2026 BUDGET ADOPTED WITH ORDINANCE NO. 1402 ON DECEMBER 3, 2025, AND PROVIDING FOR SEVERABILITY, AND EFFECTIVE DATE, AND FOR SUMMARY PUBLICATION BY ORDINANCE TITLE ONLY.**

### **R E C I T A L S:**

1. WHEREAS, the City Council of the City of Cosmopolis adopted the 2026 Budget with Ordinance No. 1402 on December 3, 2025.
2. WHEREAS, unplanned and unbudgeted expenditures have been identified.
3. WHEREAS, the City Council approved a Comprehensive Plan on April 15, 2026.
3. WHEREAS, the City Council has determined that it is in the best interest of the City of Cosmopolis to increase the General Fund budget by \$192,115.
4. WHEREAS, the increase in the General Fund expenditure budget will be offset by increases in current year revenue of \$68,852 and prior year revenue (beginning fund balance) of \$123,263.
5. WHEREAS, the City Council has determined that it is in the best interest of the City of Cosmopolis to increase the Real Estate Excise Tax Fund budget by \$242,901.
6. WHEREAS, the increase in the Real Estate Excise Tax Fund expenditure budget will be offset by a decrease in fund balance of \$242,901.
7. WHEREAS, the City Council has determined that it is in the best interest of the City of Cosmopolis to increase the Sewer Fund budget by \$273,000.

8. WHEREAS, the increase in the Sewer Fund expenditure budget will be offset by a decrease in fund balance of \$273,000.

9. WHEREAS, the City Council has determined that it is in the best interest of the City of Cosmopolis to remove the position of Police Clerk and add the position of part-time City Administrator to the authorized FTE schedule.

10. WHEREAS, following the introduction of this ordinance at the Council's meeting held on August 19, 2026, an opportunity for public comment will have been provided as required by law before the adoption of this ordinance.

NOW, THEREFORE, BE IT ORDAINED AS FOLLOWS BY THE CITY COUNCIL OF THE CITY OF COSMOPOLIS:

SECTION I: The above stated recitals are hereby adopted as the council's findings and reasons for the adoption of this ordinance.

SECTION II: The 2026 budget, as adopted with Ordinance No. 1402 is hereby amended with an increase of \$708,016 to expenditures, an increase of \$311,753 to revenues, an increase of \$123,263 to beginning fund balance, and a decrease of \$273,000 to ending fund balance as detailed below:

### Expenditures

| <u>Fund</u>                  | <u>Original</u>  | <u>Amended</u>   | <u>Increase (Decrease)</u> |
|------------------------------|------------------|------------------|----------------------------|
| 001 General                  | 1,216,050        | 1,408,165        | 192,115                    |
| 002 Fire Equipment           | 120,150          | 120,150          | -                          |
| 007 Equipment Reserve        | 25,000           | 25,000           | -                          |
| 010 Drug Seizure             | -                | -                | -                          |
| 011 Advance Payment Cemetery | -                | -                | -                          |
| 012 Makarenko Park Operating | 23,997           | 23,997           | -                          |
| 101 Street                   | 122,276          | 122,276          | -                          |
| 105 Cemetery Perpetual Care  | -                | -                | -                          |
| 110 EMS                      | 500,820          | 500,820          | -                          |
| 205 2020 UTGO Bond           | 187,800          | 187,800          | -                          |
| 305 Real Estate Excise Tax   | -                | 242,901          | 242,901                    |
| 401 Water                    | 663,490          | 663,490          | -                          |
| 402 Sewer                    | 179,150          | 452,150          | 273,000                    |
| 410 Stormwater               | 44,391           | 44,391           | -                          |
| 702 Makarenko Park Reserve   | 12,000           | 12,000           | -                          |
| <b>Total</b>                 | <b>3,095,123</b> | <b>3,803,139</b> | <b>708,016</b>             |

### Revenues

| <u>Fund</u>                  | <u>Original</u>  | <u>Amended</u>   | <u>Increase (Decrease)</u> |
|------------------------------|------------------|------------------|----------------------------|
| 001 General                  | 1,216,050        | 1,284,902        | 68,852                     |
| 002 Fire Equipment           | 118,000          | 118,000          | -                          |
| 007 Equipment Reserve        | 35,000           | 35,000           | -                          |
| 010 Drug Seizure             | -                | -                | -                          |
| 011 Advance Payment Cemetery | -                | -                | -                          |
| 012 Makarenko Park Operating | 12,000           | 12,000           | -                          |
| 101 Street                   | 122,276          | 122,276          | -                          |
| 105 Cemetery Perpetual Care  | -                | -                | -                          |
| 110 EMS                      | 509,319          | 509,319          | -                          |
| 205 2020 UTGO Bond           | 188,000          | 430,901          | 242,901                    |
| 305 Real Estate Excise Tax   | 20,000           | 20,000           | -                          |
| 401 Water                    | 650,000          | 650,000          | -                          |
| 402 Sewer                    | 650,000          | 650,000          | -                          |
| 410 Stormwater               | 70,000           | 70,000           | -                          |
| 702 Makarenko Park Reserve   | 42,000           | 42,000           | -                          |
| <b>Total</b>                 | <b>3,632,645</b> | <b>3,944,398</b> | <b>311,753</b>             |

### Beginning Fund Balance

| <b><u>Fund</u></b>           | <b><u>Original</u></b>  | <b><u>Amended</u></b>   | <b><u>Increase (Decrease)</u></b> |
|------------------------------|-------------------------|-------------------------|-----------------------------------|
| 001 General                  | 64,269                  | 187,532                 | 123,263                           |
| 002 Fire Equipment           | 17,788                  | 17,788                  | -                                 |
| 007 Equipment Reserve        | 18,585                  | 18,585                  | -                                 |
| 010 Drug Seizure             | 705                     | 705                     | -                                 |
| 011 Advance Payment Cemetery | 8,248                   | 8,248                   | -                                 |
| 012 Makarenko Park Operating | 25,288                  | 25,288                  | -                                 |
| 101 Street                   | 2,384                   | 2,384                   | -                                 |
| 105 Cemetery Perpetual Care  | 79,390                  | 79,390                  | -                                 |
| 110 EMS                      | -                       | -                       | -                                 |
| 205 2020 UTGO Bond           | (243,101)               | (243,101)               | -                                 |
| 305 Real Estate Excise Tax   | 289,463                 | 289,463                 | -                                 |
| 401 Water                    | 129,632                 | 129,632                 | -                                 |
| 402 Sewer                    | 599,061                 | 599,061                 | -                                 |
| 410 Stormwater               | 168,477                 | 168,477                 | -                                 |
| 702 Makarenko Park Reserve   | 331,780                 | 331,780                 | -                                 |
| <b>Total</b>                 | <b><u>1,491,969</u></b> | <b><u>1,615,232</u></b> | <b><u>123,263</u></b>             |

### Ending Fund Balance

| <b><u>Fund</u></b>           | <b><u>Original</u></b>  | <b><u>Amended</u></b>   | <b><u>Increase (Decrease)</u></b> |
|------------------------------|-------------------------|-------------------------|-----------------------------------|
| 001 General                  | 64,269                  | 64,269                  | -                                 |
| 002 Fire Equipment           | 15,638                  | 15,638                  | -                                 |
| 007 Equipment Reserve        | 28,585                  | 28,585                  | -                                 |
| 010 Drug Seizure             | 705                     | 705                     | -                                 |
| 011 Advance Payment Cemetery | 8,248                   | 8,248                   | -                                 |
| 012 Makarenko Park Operating | 13,291                  | 13,291                  | -                                 |
| 101 Street                   | 2,384                   | 2,384                   | -                                 |
| 105 Cemetery Perpetual Care  | 79,390                  | 79,390                  | -                                 |
| 110 EMS                      | 8,499                   | 8,499                   | -                                 |
| 205 2020 UTGO Bond           | (242,901)               | -                       | 242,901                           |
| 305 Real Estate Excise Tax   | 309,463                 | 66,562                  | (242,901)                         |
| 401 Water                    | 116,142                 | 116,142                 | -                                 |
| 402 Sewer                    | 1,069,911               | 796,911                 | (273,000)                         |
| 410 Stormwater               | 194,086                 | 194,086                 | -                                 |
| 702 Makarenko Park Reserve   | 361,780                 | 361,780                 | -                                 |
| <b>Total</b>                 | <b><u>2,029,491</u></b> | <b><u>1,756,491</u></b> | <b><u>(273,000)</u></b>           |

SECTION III: The FTE schedule included in the 2026 budget, as adopted with Ordinance No. 1402 is hereby amended as follows:

|                           | Hourly                |                        |                        |                        |                        |                      |         |
|---------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|----------------------|---------|
|                           | Step A<br>0-12 months | Step B<br>13-24 months | Step C<br>25-36 months | Step D<br>37-48 months | Step E<br>49-60 months | Step F<br>61+ months |         |
| <b>Part Time - Hourly</b> |                       |                        |                        |                        |                        |                      |         |
| City Administrator        | 52.50                 | 54.08                  | 55.70                  | 57.37                  | 59.09                  | 60.86                | added   |
| Clerk Treasurer           | 36.54                 | 37.63                  | 38.76                  | 39.93                  | 41.12                  | 42.36                |         |
| Jr. Deputy Clerk          | 24.42                 | 25.15                  | 25.91                  | 26.69                  | 27.49                  | 28.31                |         |
| Utility Billing Clerk     | 24.42                 | 25.15                  | 25.91                  | 26.69                  | 27.49                  | 28.31                |         |
| <del>Police Clerk</del>   | —                     | —                      | —                      | —                      | —                      | —                    | removed |

SECTION IV: If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The Council hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases had been declared invalid or unconstitutional, and if for any reason this Ordinance should be declared invalid or unconstitutional, then the original ordinance or ordinances shall be in full force and effect.

SECTION V: This ordinance, being an exercise of power specifically delegated to the City legislative body, is not subject to referendum, and shall take effect five (5) days after passage and publication of an approved summary thereof consisting of the title.

PASSED THIS \_\_\_\_\_ DAY OF August 2026, by the City Council of the City of Cosmopolis, and signed in approval therewith this \_\_\_\_\_ day of August, 2026.

**ORDINANCE 1405 - 6**

**CITY OF COSMOPOLIS  
1300 1<sup>st</sup> STREET  
COSMOPOLIS, WA 98537**

CITY OF COSMOPOLIS:

\_\_\_\_\_  
LINDA SPRINGER, Mayor

ATTEST:

\_\_\_\_\_  
MACKENZIE ADAMS, City Clerk Treasurer

APPROVED AS TO FORM:

\_\_\_\_\_  
CHRISTOPHER JOHN COKER, City Attorney

PUBLISHED: \_\_\_\_\_



# 2026 Stormwater Comprehensive Plan and Rate Study

City of Cosmopolis

*Cosmopolis, Washington*

June 2, 2026



## Certificate of the Engineer

The technical material and data contained in this Stormwater Comprehensive Plan was prepared under the supervision and direction of the undersigned.



Xiating Chen, PE (WA)  
Stormwater Engineer  
HDR Engineering, Inc.

## Contents

|                                                        |    |
|--------------------------------------------------------|----|
| Executive Summary .....                                | 1  |
| 1 Introduction .....                                   | 1  |
| 1.1 Goals and Objectives .....                         | 1  |
| 2 Background .....                                     | 3  |
| 2.1 Geography and Climate .....                        | 3  |
| 2.2 Known Flooding Issues .....                        | 3  |
| 2.3 Sensitive Areas .....                              | 5  |
| 2.3.1 Wetlands .....                                   | 5  |
| 2.3.2 Fisheries .....                                  | 7  |
| 2.3.3 Archaeological Significance .....                | 9  |
| 2.4 Applicable Policies and Drivers .....              | 11 |
| 2.4.1 Municipal Code .....                             | 11 |
| 2.4.2 Office of Chehalis Basin .....                   | 11 |
| 3 Hydrologic and Hydraulic Modeling .....              | 12 |
| 3.1 Basin Overview .....                               | 14 |
| 3.1.1 Mill Creek Culvert Drainage Basin .....          | 14 |
| 3.1.2 E Street Basin .....                             | 14 |
| 3.1.3 2nd Street Basin .....                           | 15 |
| 3.2 Modeling Tools .....                               | 15 |
| 3.2.1 Hydrologic Modeling .....                        | 15 |
| 3.2.2 Hydraulic Modeling .....                         | 15 |
| 3.3 Model Development .....                            | 16 |
| 3.3.1 Design Storm and Hydrologic Model .....          | 16 |
| 3.3.2 Hydraulic Model .....                            | 17 |
| 3.4 System Performance and Proposed Improvements ..... | 20 |
| 3.4.1 Mill Creek Culvert Drainage Basin .....          | 20 |
| 3.4.2 E Street Basin .....                             | 20 |
| 3.4.3 2nd Street Basin .....                           | 23 |
| 3.5 Chapter Summary .....                              | 26 |
| 4 Capital Improvement Plan .....                       | 27 |
| 4.1 Identified Capital Improvement Projects .....      | 27 |
| 4.2 CIP Prioritization Approach .....                  | 29 |
| 4.3 CIP Cost Opinions Development .....                | 31 |
| 4.4 CIP Project Ranking and Summaries .....            | 31 |
| 4.4.1 Mill Creek Improvements Interdependency .....    | 31 |
| 4.4.2 Downtown Improvements .....                      | 32 |
| 4.5 Chapter Summary .....                              | 32 |
| 5 Financial Plan .....                                 | 33 |
| 5.1 Legal Considerations .....                         | 33 |
| 5.2 Rate Study Approach .....                          | 33 |
| 5.2.1 Revenue Requirement Analysis .....               | 34 |
| 5.2.2 Capital Funding Plan .....                       | 35 |
| 5.3 Reserve Fund Balance .....                         | 40 |

|     |                                       |    |
|-----|---------------------------------------|----|
| 5.4 | Existing Rates .....                  | 41 |
| 5.5 | Proposed Rates.....                   | 42 |
| 5.6 | Financial Policies.....               | 44 |
| 5.7 | Chapter Summary and Conclusions ..... | 46 |
| 6   | Recommended Next Steps .....          | 48 |
| 7   | References .....                      | 49 |

## Tables

|             |                                                       |    |
|-------------|-------------------------------------------------------|----|
| Table ES-1. | Summary of recommended CIP projects .....             | 1  |
| Table 3-1.  | PCSWMM drainage basin area and flow rate summary..... | 16 |
| Table 3-2.  | Proposed improvements on Mill Creek culverts .....    | 20 |
| Table 3-3.  | Proposed improvements in E Street basin .....         | 21 |
| Table 3-4.  | Proposed improvements in 2nd Street basin.....        | 24 |
| Table 4-1.  | Summary of proposed CIPs.....                         | 27 |
| Table 4-2.  | CIP prioritization criteria.....                      | 30 |
| Table 4-3.  | CIP prioritization scores.....                        | 30 |
| Table 4-4.  | CIP project summary table .....                       | 31 |
| Table 5-1.  | Capital funding plan (in \$1,000 dollars).....        | 36 |
| Table 5-2.  | Available grant and loan opportunities .....          | 37 |
| Table 5-3.  | Financial plan (in \$1,000 dollars).....              | 39 |
| Table 5-4.  | Historic stormwater rates .....                       | 41 |
| Table 5-5.  | Historic stormwater rates .....                       | 42 |
| Table 5-6.  | Alternative rate structures .....                     | 43 |

## Figures

|             |                                                                    |    |
|-------------|--------------------------------------------------------------------|----|
| Figure 1-1. | City of Cosmopolis vicinity map.....                               | 2  |
| Figure 2-1. | Plan study area and known flooding issues .....                    | 4  |
| Figure 2-2. | Sensitive area overview map – wetlands .....                       | 6  |
| Figure 2-3. | Sensitive area overview map – fish passage barriers .....          | 8  |
| Figure 2-4. | Sensitive area overview map – archaeological risks.....            | 10 |
| Figure 3-1. | Stormwater infrastructure map .....                                | 13 |
| Figure 3-2. | E Street basin and facility map .....                              | 18 |
| Figure 3-3. | 2nd Street basin and facility map .....                            | 19 |
| Figure 3-4. | Profile of E Street basin existing and proposed conditions .....   | 21 |
| Figure 3-5. | E Street outfall basin proposed improvements.....                  | 22 |
| Figure 3-6. | Profile of 2nd Street basin existing and proposed conditions ..... | 23 |
| Figure 3-7. | 2nd Street outfall basin proposed improvements .....               | 25 |
| Figure 4-1. | Capital improvement project overview map .....                     | 28 |
| Figure 5-1. | Rate study approach and breakdown.....                             | 34 |
| Figure 5-2. | Reserve fund balance analysis.....                                 | 41 |
| Figure 5-3. | Impact of rate structure changes on single-family rates.....       | 44 |

## Appendices

- Appendix A. Overburdened Community Assessment
- Appendix B. Mill Creek MOIP TM
- Appendix C. CIP Detailed Scoring Criteria
- Appendix D. Capital Improvement Project Summary Sheets

## Abbreviations

|          |                                                                      |
|----------|----------------------------------------------------------------------|
| AACE     | Association for the Advancement of Cost Engineering                  |
| B&O      | Business and Occupation                                              |
| BMP      | best management practices                                            |
| CCTV     | closed-circuit television                                            |
| CHI      | Computational Hydraulics Inc.                                        |
| CIP      | Capital Improvement Plan                                             |
| City     | City of Cosmopolis                                                   |
| CPI-W    | Consumer Price Index for Urban Wage Earners and Clerical Workers     |
| DAHP     | Washington State Department of Archaeology and Historic Preservation |
| Ecology  | Washington State Department of Ecology                               |
| EPA-SWMM | Environmental Protection Agency-Stormwater Management Model          |
| FEMA     | Federal Emergency Management Agency                                  |
| FIS      | Flood Insurance Study                                                |
| GIS      | geospatial information system                                        |
| HDR      | HDR Engineering, Inc.                                                |
| H&H      | hydrologic and hydraulic                                             |
| HEC-RAS  | Hydrologic Engineering Center River Analysis System                  |
| ID       | identifier                                                           |
| LIDAR    | Light Detection and Ranging                                          |
| MOIP     | Multi-Objective Improvement Plan                                     |
| MS4      | Municipal Separate Storm Sewer System                                |
| NPDES    | National Pollutant Discharge Elimination System                      |
| O&M      | operations and maintenance                                           |
| OCB      | Office of Chehalis Basin                                             |
| RCW      | Revised Code of Washington                                           |
| R&R      | Renewal and replacement                                              |
| USGS     | United States Geological Survey                                      |
| SWCP     | Stormwater Comprehensive Plan                                        |
| USD      | United States dollar                                                 |
| WDFW     | Washington State Department of Fish and Wildlife                     |
| WSDOT    | Washington State Department of Transportation                        |
| WSE      | water surface elevation                                              |
| WWHM     | Western Washington Hydrology Model                                   |

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# Executive Summary

The City of Cosmopolis (City) has developed this Stormwater Comprehensive Plan (SWCP) as a first step in building a long-term roadmap for managing the City’s existing stormwater system. Historically, the City has experienced severe flooding driven by several interconnected challenges including low-lying topography, proximity to the Chehalis River, high rainfall, and both aging and undersized stormwater infrastructure. The City is home to approximately 2,300 residents and contains communities which could be defined as overburdened within Washington State: “...minority, low-income, tribal, or indigenous populations or geographic locations in Washington State that potentially experience disproportionate environmental harms and risks [due to frequent flooding]”. Historically, the City has operated with a limited budget; the City’s 2026 operations and maintenance budget totals \$44,391.

In the State of Washington, the Department of Ecology (Ecology) manages municipal stormwater systems under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program. Due to the size of the City’s system, Cosmopolis is not permitted under an MS4 permit; instead, it is managed through a mix of local ordinances, best management practices (BMPs), and voluntary compliance with state stormwater standards.

This SWCP was developed collaboratively by City staff and HDR Engineering, Inc. (HDR) in 2025 and 2026. This is the City’s first comprehensive stormwater planning document and is intended to provide an evaluation of the current City stormwater system leveraging staff knowledge, supplemented by hydrologic and hydraulic modeling analyses. Based on the results of these analyses, HDR has developed a 10-year Capital Improvement Plan (CIP) highlighting six major projects, as shown in Table ES-1. Project costs range from approximately \$769,000 to \$9.0 million per project, reflecting planning-level (Class 5) estimates. Additionally, these six projects were prioritized based on how strongly they address flooding risks, regulatory needs, system limitations, reliability concerns, and environmental improvements.

**Table ES-1. Summary of recommended CIP projects**

| Priority | Project Name                                                          | Planned construction year | Project cost |
|----------|-----------------------------------------------------------------------|---------------------------|--------------|
| 1        | Mill Creek Tide Gate Study and Design                                 | 2028                      | \$769,300    |
| 2        | Mill Creek Tide Gate Improvements                                     | 2029                      | \$4,172,800  |
| 3        | Mill Creek Altenau St., H St., and G St. Culvert Crossing Replacement | 2030                      | \$8,998,300  |
| 4        | Mill Creek F St., E St. and C St. Culvert Crossing Replacement        | 2035                      | \$8,681,600  |
| 5        | F St. NE of 1st St. Flooding and E St. Outfall Improvements           | 2036                      | \$1,986,400  |
| 6        | J St. at 4th St. Flooding and 2nd St. Outfall Improvements            | 2038                      | \$3,408,700  |

Project summary sheets for each of these recommended improvement projects have been developed to provide the City with a high-level scope of work for the project along

with initial geotechnical, utilities, permits, and real estate and easement considerations. They are provided in Appendix D.

To support the City's ongoing operations and jumpstart capital improvements planning, this SWCP evaluates the utility's financial capacity to determine whether current revenues are sufficient and to identify potential rate adjustments necessary to ensure long-term system sustainability. This financial analysis highlights a structural gap between existing revenues and future costs; the City's current stormwater revenue (~\$70,000 annually) is insufficient to support rising operating costs and anticipated capital needs.

The City's current capital funding strategy relies primarily on securing grants to implement major projects to address ongoing flooding issues. While this approach helps limit the need for large rate increases, it introduces risk because grant funding is not guaranteed and often cannot fund capital projects resulting from routine wear and tears of an aging system.

Without adjustments to rates and external grant support, projected costs will exceed revenues, leading to increasing financial deficits over time and growing flooding risks due to system failure. As a result, the City is encouraged to gradually increase rate-funded capital contributions to ensure ongoing system reliability and reduce the risk of costly emergency repairs, while continue applying for grants to fund big-ticket infrastructure upgrades. Results of this financial analysis suggest two primary rate-related changes:

- Consider implementing phased rate increases (5% annually for five years, followed by ~2% annually)
- Consider transitioning to a more equitable rate structure (based on impervious surface area)

In addition to these recommendations, external funding remains a practical supplemental resource for helping the City meet projected revenue needs. This SWCP highlights a variety of grants and loan opportunities for Washington State stormwater utilities. Typically, utilities serving overburdened or disadvantaged communities gain preferential access to funding and more favorable financial terms such as grants, principal forgiveness, and below market interest loans. In collaboration with the nearby Cities of Aberdeen and Hoquiam, Cosmopolis participated in a community analysis to better understand citywide demographics and how the City can establish effective stormwater engagement processes. This analysis is described in Appendix A.

# 1 Introduction

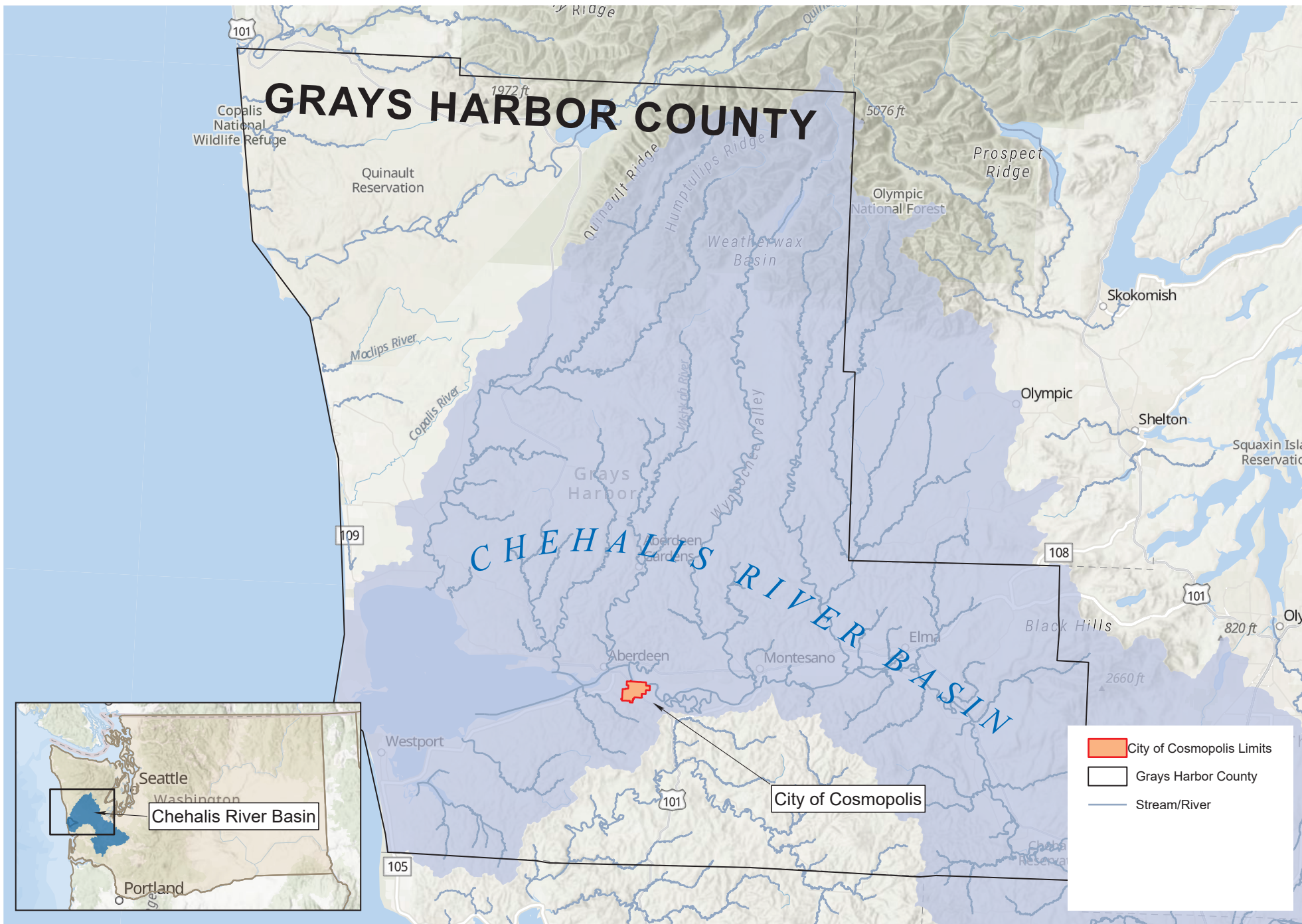
Cosmopolis (City) is a small city located in Grays Harbor County, Washington, on the flat plain of the Chehalis River Valley. The Chehalis River Basin is the second-largest watershed in the state, including more than 3,300 miles of rivers and streams and crossing seven counties, as shown in Figure 1-1. The City operates a stormwater utility to manage, fund, operate, and improve the City's stormwater drainage system.

The City lies on the southern bank of the Chehalis River near its mouth at the head of Grays Harbor, an estuarine bay of the Pacific Ocean. Mill Creek, a short tributary of the Chehalis River, runs through the western part of the City. Historically, significant flooding has occurred within the city limits, and the City has limited capacity to address them. In response, in 2025, the City hired HDR Engineering, Inc. through funding from the Office of Chehalis Basin to develop a Stormwater Comprehensive Plan (SWCP) intended to provide a strategy for managing the stormwater system. This is the City's first comprehensive stormwater planning document.

## 1.1 Goals and Objectives

The purpose of this SWCP is to advance the City's goals of protecting communities from flooding, maintaining reliable services, and enhancing opportunities for fish passage and recreation. These goals can be achieved by meeting the following five objectives:

1. Review the existing stormwater system and identify study areas to be considered for stormwater planning.
2. Identify overburdened communities within the city limits, evaluate barriers to participation in stormwater management activities, and recommend an inclusive engagement framework.
3. Evaluate the City's existing stormwater infrastructure and its effectiveness in reducing flood risk and improving conditions for fish passage and recreation.
4. Develop a capital investment strategy that addresses identified stormwater challenges and prioritizes these needs into a Capital Improvement Plan (CIP).
5. Prepare a comprehensive rate study that evaluates the full cost of operating and maintaining the existing and expanding stormwater system.



## 2 Background

The city's total area is approximately 1.5 square miles, and it is divided into a traditional gridded downtown area and a later-developed suburban residential area southwest of Mill Creek, which runs through the city and discharges into the Chehalis River. U.S. Route 101 is the only major road that goes through the City. According to the 2024 American Community Survey, the City's population is estimated to be 2,202 (U.S. Census Bureau, 2024).

Historically, the area of the city limits was inhabited by the Chehalis Tribe of the lower Chehalis River. After European settlement, the City was incorporated in 1891 and was quickly developed given the geographical advantages for the fur and lumber trades. Over the past century, the Cosmopolis mill, the predecessor of Cosmo Specialty Fibers, contributed significantly to the City's economic growth, but it had also left behind decades of legacy environmental pollutions affecting the City, its communities, and the Chehalis River.

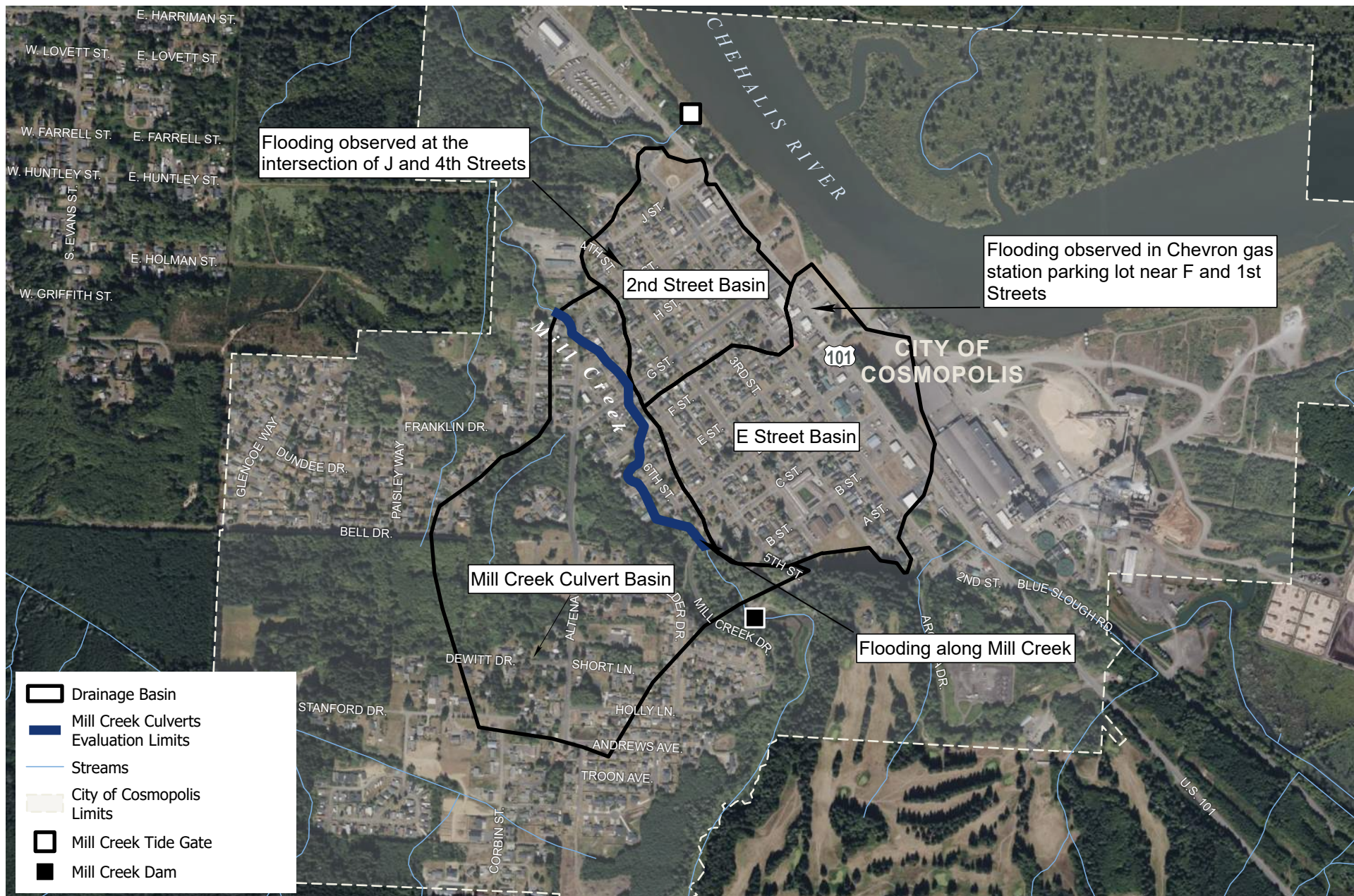
### 2.1 Geography and Climate

The greater Grays Harbor region is characterized by cool summers and mild winters, and it is affected more by its proximity to the Pacific Ocean than by its distance from the equator. The annual average rainfall is approximately 70 inches with about 10 inches of that occurring as snow. All the stormwater collected within the city limits discharges into the Chehalis River, via either the downtown outfalls or Mill Creek. Like its other neighbors in Grays Harbor County, the low elevations and proximity to the Chehalis River make the City highly susceptible to tidal influences, storm surge, and river flooding. Flooding has long shaped the basin because of its broad, flat topography, and the region has experienced increasingly severe floods in recent decades. Five of the largest recorded floods have occurred in the last 30 years.

### 2.2 Known Flooding Issues

The study area for this SWCP includes three drainage basins within the City (discussed further in Section 3.1), as shown in Figure 2-1. Across these basins, three primary flooding areas have been identified by City staff and were used to inform the development of this SWCP:

- Along Mill Creek
- Intersection of J and 4<sup>th</sup> Streets
- Chevron gas station parking lot near F and 1st Streets

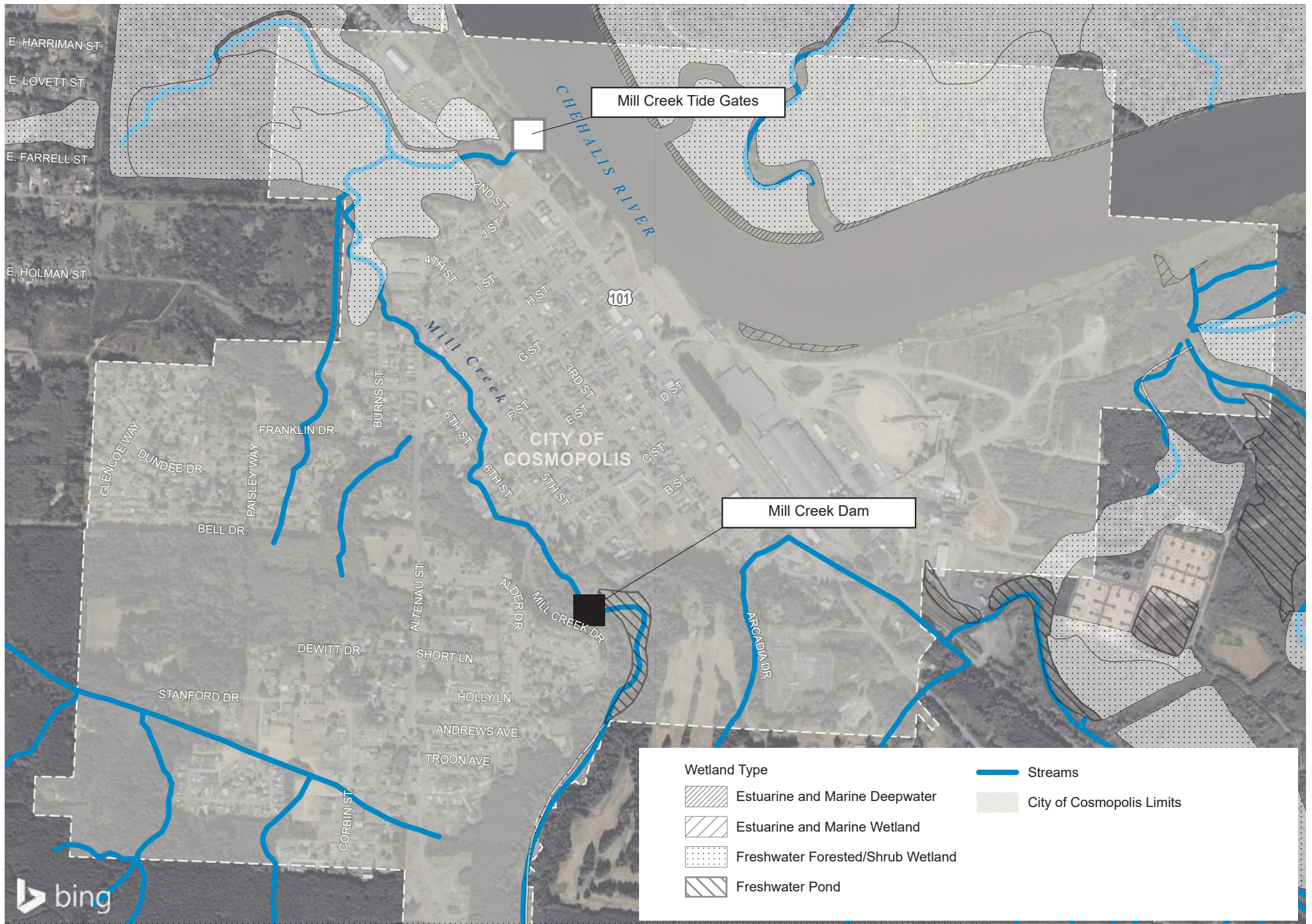


## 2.3 Sensitive Areas

Sensitive areas have been identified throughout Grays Harbor County and the city limits, as described below. These sensitive areas require special consideration when evaluating project risks, project complexity, and stakeholder engagement during stormwater planning. The identified sensitive areas impacting the City's stormwater management were used during the project prioritization process described in Chapter 4.

### 2.3.1 Wetlands

Because of the City's location on the Chehalis River and Mill Creek, shrublands and estuarine wetlands are identified around the downtown area and along Mill Creek near the Mill Creek Dam (U.S. Fish & Wildlife Services, 2024). Stormwater can have significant impacts on endangered and threatened species, especially those that depend on aquatic and riparian habitats like rivers, estuaries, and wetlands. Potential impacts from stormwater planning might include more stringent development regulations and additional measures to improve water quality. These actions may include better source control of pollutants, construction of additional best management practices (BMPs) designed to reduce flooding, erosion, and water quality impacts to receiving waters.



**SENSITIVE AREA OVERVIEW MAP - WETLANDS**  
**Figure 2-2**

### 2.3.2 Fisheries

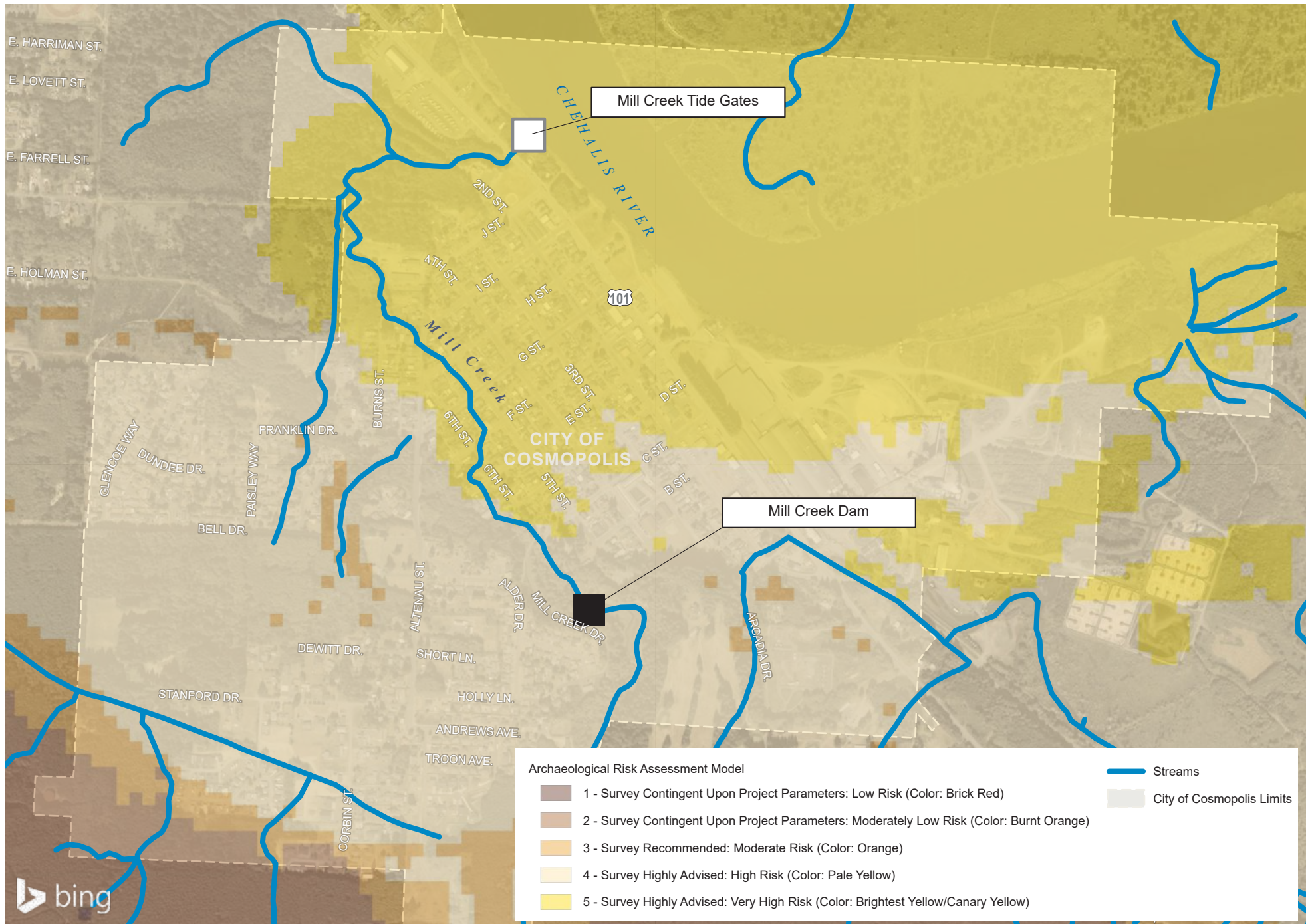
The Chehalis River supports one of the most important and diverse fish communities on the Washington coast. It is a large, rain-dominated river system that plays a critical ecological, cultural, and economic role in Grays Harbor County and the City. While these fish communities are not currently listed as threatened under the Endangered Species Act, populations are in decline. Some salmon runs in the Chehalis Basin have declined by as much as 80%, due to damaged habitat, changing climate conditions, and development. Without action, the basin could lose spring Chinook entirely within the next several decades (Washington State Department of Fish and Wildlife [WDFW], 2025).

Several fish species including coho salmon, steelhead, spring run cutthroat, and resident trout have been observed in Mill Creek, according to data from the Washington State Department of Fish and Wildlife and the Lewis Conservation District (WDFW, 2026). Although the tide gates on Mill Creek have been deemed as a partial blockage to fish passage, coho salmon have been observed spawning in the upstream portion of Mill Creek. There are opportunities in stormwater planning to improve fish passage for communities in the city and the greater Chehalis River Basin.



### 2.3.3 Archaeological Significance

The City's location on the Chehalis River has high cultural and historical value for indigenous tribes that had resided along the river long before European settlement (DAHP, 2025). This high archaeological risk shall be taken account when planning and conducting any excavation projects.



**SENSITIVE AREA OVERVIEW MAP - ARCHAEOLOGICAL RISKS**  
Figure 2-4

## 2.4 Applicable Policies and Drivers

In the State of Washington, the Department of Ecology (Ecology) manages municipal stormwater systems under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program. Due to the size of the City's system, Cosmopolis is not permitted under an MS4 permit; instead, it is managed through a mix of local ordinances, best management practices (BMPs), and voluntary compliance with state stormwater standards, as described in the following subsections.

### 2.4.1 Municipal Code

The City primarily governs its stormwater and surface water management via two local ordinances:

- **Code of Ordinances, Chapter 2.12 (Storm Drainage):** establishes minimum design and construction standards for storm drainage facilities, require professional stormwater planning and mitigation for developments, and ensure effective management of runoff, erosion, and water quality impacts.
- **Code of Ordinances, Chapter 13.65 (Storm and Surface Water Management):** establishes and funds a city stormwater utility that equitably charges developed properties based on their contribution to runoff, ensuring effective management, maintenance, and mitigation of storm and surface water problems.

### 2.4.2 Office of Chehalis Basin

The Office of Chehalis Basin (OCB) is housed within Ecology and is responsible for funding, coordinating, and implementing projects that reduce flood damage and restoring aquatic life within the Basin (Office of Chehalis Basin, 2026). The goal of the OCB is to advance the Chehalis Basin Strategy, which includes:

- Helping residents and communities protect homes and businesses from flood damage
- Working with landowners to slow harmful erosion and restore habitats for salmon and other aquatic life
- Preparing the region for more frequent major and catastrophic flooding.

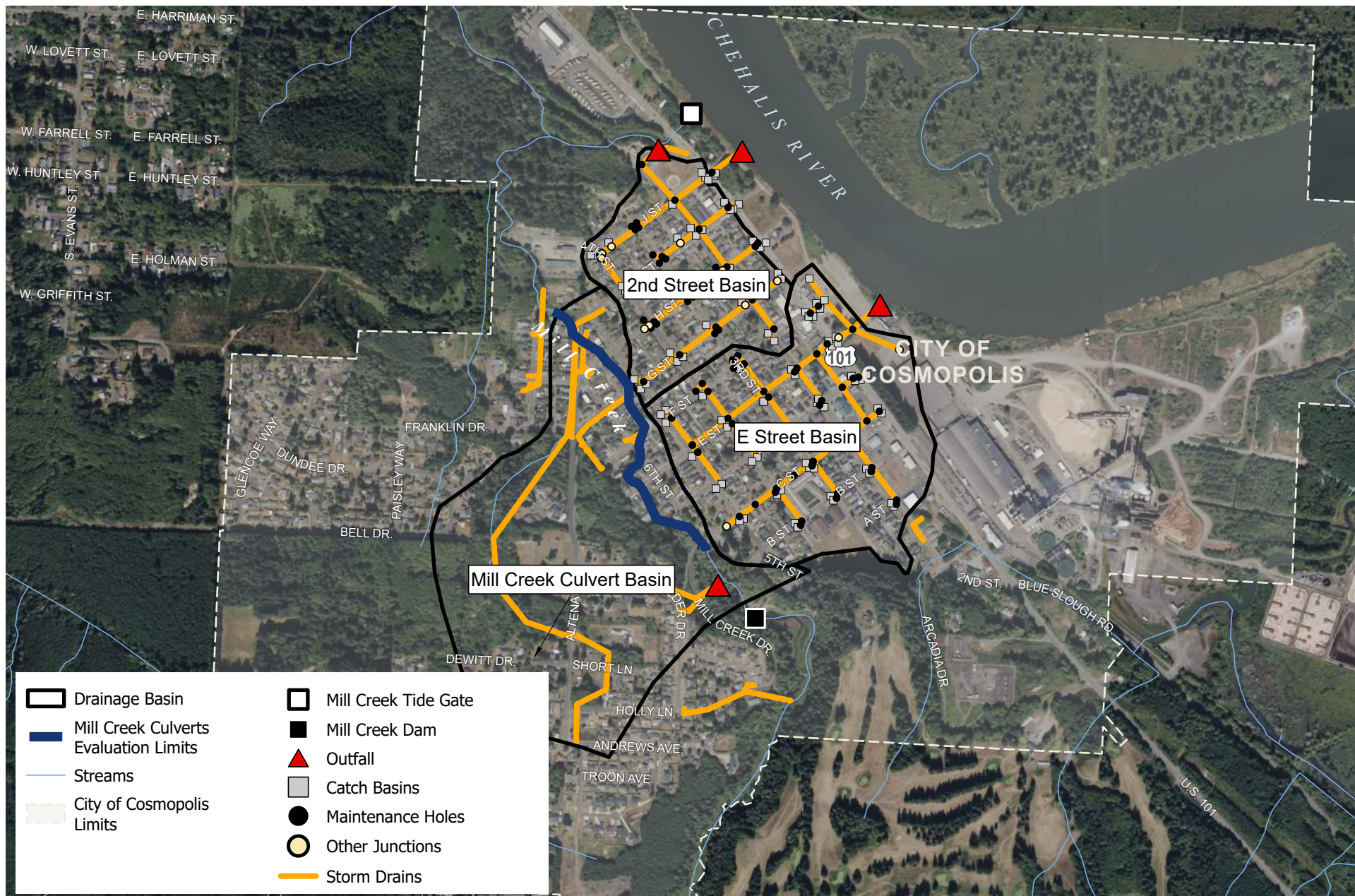
The OCB administers state funding to communities in the Chehalis River Basin, and the City acquires additional funding that aligns with goals of the Chehalis Basin Strategy to support capital improvements that reduce flood damage and restore aquatic life. Efforts to produce this SWCP were funded by a grant received by the OCB in 2025.

### 3 Hydrologic and Hydraulic Modeling

The City's stormwater drainage system includes a series of catch basins, pipes, and natural flow paths that convey stormwater runoff to the Chehalis River, either directly or via Mill Creek. The hydrologic and hydraulic (H&H) modeling analyses described in this Chapter were designed to evaluate the City's stormwater drainage basins and runoff conditions. Stormwater pipe network data and topography data were used to model the City's stormwater system; within the study area, the following known infrastructure exists:

- Approximately 220 catch basins and manholes
- Approximately 4 miles of pipes
- Two outfalls: one to the Chehalis River and one to Mill Creek.

It is important to note that the City does not currently have a geographic information system (GIS) database or up-to-date asset inventory for its stormwater infrastructure. For this SWCP, the existing pipe system in the downtown area was mapped and reviewed, and a GIS shapefile was developed from a computer-aided design (CAD) file of the stormwater pipes in downtown Cosmopolis. All available diameters, materials, and field-measured or surveyed invert elevations were added to this GIS shapefile. A GIS shapefile for catch basins, manholes, and outfalls was developed based on both the CAD file of stormwater pipes and a marked-up stormwater utility map. In addition to the surveyed topography data, 1-meter light detection and ranging (LiDAR) elevation data from the United States Geological Survey (USGS) were used to analyze the surface-water flow paths within the study area and to delineate the corresponding drainage basins for identified outfalls. A map of the completed stormwater inventory is shown in Figure 3-1.



The objective of this modeling analysis was to diagnose and address the known flooding concerns by:

- Delineating stormwater drainage basins that are affected by localized flooding, particularly in downtown Cosmopolis
- Predicting observed conditions and identifying hydraulic bottlenecks
- Evaluating mitigation alternatives, such as replacing and upsizing existing infrastructure

## 3.1 Basin Overview

As discussed in Chapter 2 and shown in Figure 3-1, three drainage basins were delineated as a part of this SWCP's modeling efforts: Mill Creek culvert drainage basin, E Street basin, and 2nd Street basin. Of these three basins, only the two downtown basins (E Street and 2nd Street) were modeled as a part of this SWCP. The Mill Creek Culvert Drainage Basin was modeled in a separate effort under the Mill Creek Multi-Objective Improvement Plan (MOIP) and described below.

### 3.1.1 Mill Creek Culvert Drainage Basin

Mill Creek flows through six culvert crossings that drain runoff from about 102 acres of nearby residential hillsides, and this reach experiences recurring localized flooding around all crossings. After a 2008 dam breach, the City created a Mill Creek Multi-Objective Improvement Plan (MOIP) in 2015 to evaluate flood reduction and fish passage improvements between Mill Creek Pond and downstream tide gates. Concurrent to this SWCP development effort, HDR updated the Mill Creek MOIP by evaluating options to reduce flooding and improve fish passage along a 0.7-mile section of Mill Creek. The draft Mill Creek MOIP technical memorandum (TM) provides more documentation on modeling methods and assumptions related to the culverts on Mill Creek. This TM can be found in Appendix B.

### 3.1.2 E Street Basin

E Street basin outfalls directly into the Chehalis River via a 24-inch-diameter pipe near the northwest perimeter of the Cosmo Specialty Fibers plant. The drainage basin consists of residential and commercial areas, and the total basin area is 33.1 acres. The basin is relatively flat, with elevation spanning from 16 to 26 feet.

Persistent flooding has been observed in the Chevron parking lot north of U.S. Highway 101 and F Street. To confirm the pipe connections contributing to this flooding issue, City staff and consultants conducted a field visit in December 2025 and measured the approximate invert elevations for pipes near the flooding location. During the visit, a closed-circuit television (CCTV) inspection identified two issues contributing to the flooding: a collapsed pipe connected to the E Street outfall and a sag in the pipe draining the catch basin in the Chevron parking lot.

### 3.1.3 2nd Street Basin

The 2nd Street basin outfalls into Mill Creek via an 18-inch-diameter pipe near the Cosmopolis Lions Club. The drainage basin consists of mostly residential areas on the west side of downtown Cosmopolis, and the total basin area is 38.1 acres. The basin slope is also flat, with elevations spanning from 11 to 17 feet.

Intermittent flooding has been observed at the intersection of J and 4th streets near the Grays Harbor Road District Maintenance Yard. The invert elevations along 2nd and J streets were surveyed in 2023, and they were used for developing this model.

## 3.2 Modeling Tools

### 3.2.1 Hydrologic Modeling

Hydrologic modeling is a tool that simulates how surface water flows within a basin before it is discharged to a water body or enters the stormwater pipe network. The main goal is to determine how much water infiltrates into the ground and how much runs off over land. This analysis is based primarily on land cover and topography data. Given the flat terrain in downtown Cosmopolis, the hydrologic models assumed gradual slopes between available data points.

For the Mill Creek MOIP, previous modeling results from a 2020 Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) informed the basin hydrology, therefore, no further hydrologic analyses were performed in the Mill Creek culvert drainage basin.

The hydrologic modeling for downtown basins was performed using the Western Washington Hydrology Model (WWHM) developed by Ecology. Leveraging long-term recorded precipitation data in western Washington, WWHM simulates hydrology continuously based on input land covers and other in-basin hydrologic features, and outputs peak flow frequency and magnitude. This peak flow was later used as a basis of hydraulic modeling.

### 3.2.2 Hydraulic Modeling

Hydraulic modeling is a tool that simulates how stormwater flows within pipe systems or in natural flow paths. As opposed to hydrologic modeling's focus on the interaction between water and land, hydraulic models simulate the water level and the energy that water generates as it flows through channelized systems. When the flows are too high for the channel geometry, water levels rise and cause water to spill out of the channels, resulting in flooding upstream.

Hydraulic analyses on the downtown stormwater pipe systems were performed using PCSWMM, a modeling software from Computational Hydraulics Inc. (CHI) leveraging the U.S. Environmental Protection Agency's Storm Water Management Model (EPA-SWMM). The primary components of the PCSWMM hydraulic models are as follows:

- **Conduits** are pipes or channels that convey stormwater from one point to another. They are represented in PCSWMM by name, description, geometry, and set of parameters that define the hydraulic characteristics of the conduit, such as length,

diameter or cross section, and roughness. In addition, connectivity is defined by identifying upstream and downstream junction connections.

- **Junctions** are points where two or more conduits meet. Junctions are placed where there is a change in conduit characteristics (e.g., change in slope, diameter, material). They are represented in PCSWMM by name, description, and set of parameters that define the invert and ground or flood elevations.
- **Outfalls** are points where stormwater is discharged from the PCSWMM model. They are represented in PCSWMM by name, description, and set of parameters that define the location of the outfall, such as the elevation and any receiving water body boundary condition (e.g., water-surface elevation or free discharge).

For the Mill Creek MOIP, a commonly used software called Hydrologic Engineering Center River Analysis System (HEC-RAS) was used to model the hydraulics of the Mill Creek channel.

### 3.3 Model Development

The development of an applicable design storm is critical in H&H modeling. The design storm, which is defined by both rainfall depth and temporal distribution, directly impacts the hydrologic response of drainage basins within the City in terms of peak runoff flow rates and total runoff volumes. This hydrologic response, in turn, serves as the inflow basis for evaluating the City's stormwater drainage system in a hydraulic model.

In lieu of developing design storms or hydrologic models for the Mill Creek MOIP, the MOIP performed hydraulic modeling analysis only on the creek channels affected by the culvert crossings. The HEC-RAS hydraulic model used 100-year peak flow and water surface elevation (WSE) from the 2020 FEMA FIS as starting boundary conditions for the model, as detailed further in Appendix B.

The remaining section focuses on the two downtown basins, the E Street and 2nd Street basins. It discusses the development of the input design storm, the hydrologic model that generates surface flow and runoff, and the hydraulic model that evaluates the stormwater system's response to the surface runoff.

#### 3.3.1 Design Storm and Hydrologic Model

The hydrologic models for downtown basins were performed in WWHM. Because WWHM is based on historical precipitation records, the design storms for these models were based on a continuous rainfall simulation and not from a single event. The hydrologic models computed the 10-year peak flow based on the total impervious and pervious areas, and the results are included in Table 3-1.

**Table 3-1. PCSWMM drainage basin area and flow rate summary**

| Basin      | Total impervious (acres) | Pervious area (acres) | Total acres | 10-year peak flow (cfs) |
|------------|--------------------------|-----------------------|-------------|-------------------------|
| E Street   | 21.9                     | 11.3                  | 33.1        | 27.3                    |
| 2nd Street | 24.8                     | 13.3                  | 38.1        | 31.2                    |

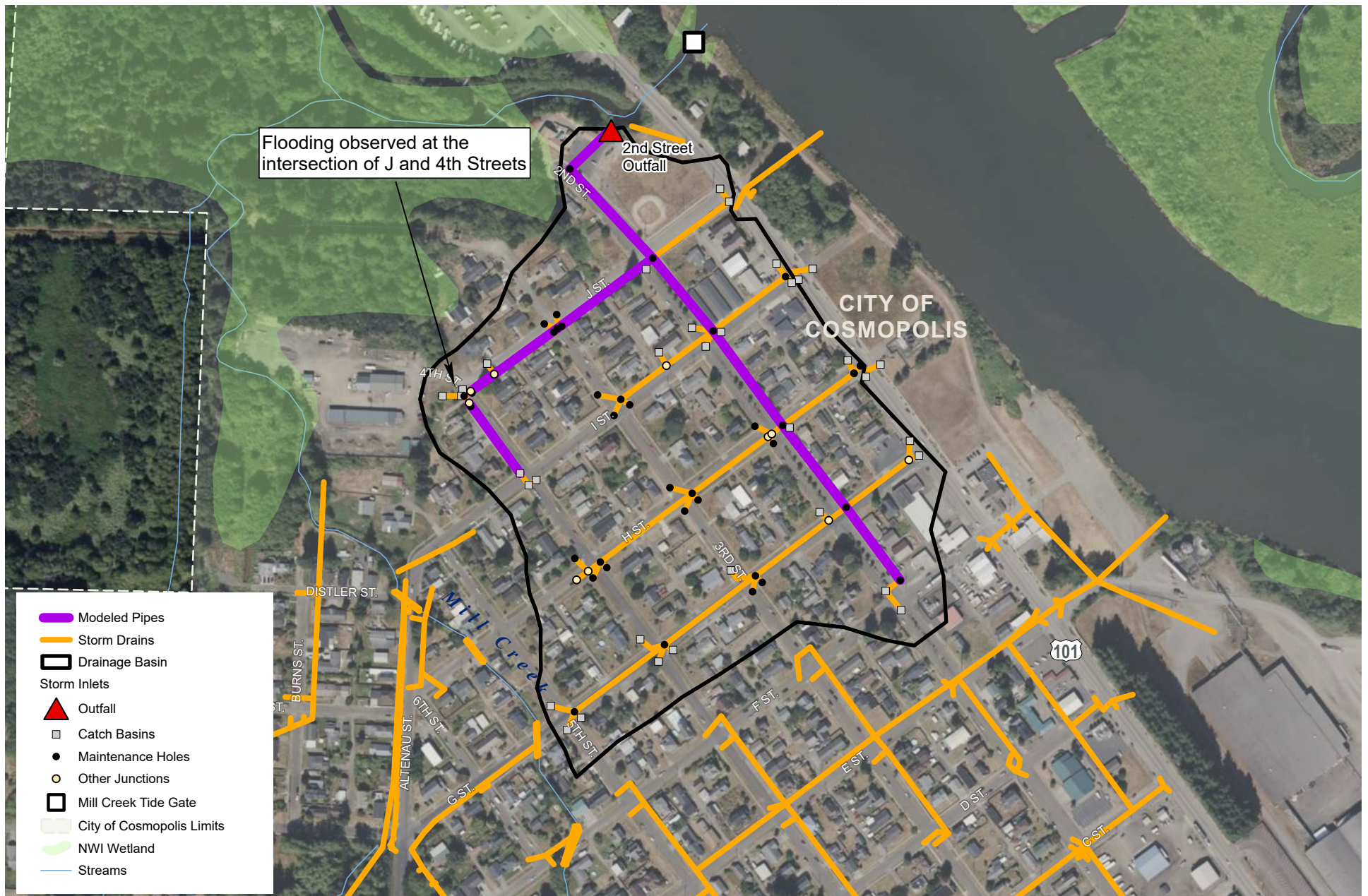
A 24-hour triangular hydrograph was applied to the 10-year peak flow to simulate the runoff accumulation within the stormwater system. The peak flow was centered to the middle of the day. This hydrograph was then applied as base flows at the junctions in the hydraulic model.

### 3.3.2 Hydraulic Model

The hydraulic model for the City's stormwater pipe system was developed based on the City's best available CAD, supplemented by project survey data. However, the majority of junction rim and pipe invert elevation data were not available. Because of the lack of robust data and specific downstream capacity concerns, only the pipes near flooding locations and upstream large-diameter pipes were modeled. These large-diameter pipes range from 12- to 24-inch diameter in the E Street basin, and from 18- to 30-inch diameter in the 2nd Street basin. Modeling these large-diameter pipes in upstream branches with no known flooding concerns can reliably account for their impact on the downstream system's capacity.

For the pipes with unknown slopes, a minimum pipe slope of 0.5 percent was assumed. For locations where the junction rim elevations were not surveyed, it was assumed that the elevations were captured in the project LiDAR elevation data. Figure 3-2 and Figure 3-3 show the pipes, catch basins, and outfalls within the drainage basin boundaries for the E Street and 2nd Street basins, respectively.





### 3.4 System Performance and Proposed Improvements

Modeling results from both Mill Creek MOIP and from the PCSWMM analysis identified capacity constraints in the system and confirmed the flooding conditions observed in the field. Proposed improvements, such as replacing and upsizing existing infrastructure, were also evaluated based on these models. These proposed improvements serve as the basis for the 10-year CIP proposed in Chapter 4 of this SWCP.

#### 3.4.1 Mill Creek Culvert Drainage Basin

The HEC-RAS model from the Mill Creek MOIP (Appendix B) showed that the flows in Mill Creek were sensitive to backwatering from the Mill Creek tide gates, which are located at the confluence of Mill Creek and the Chehalis River. In Chapter 5, the CIP recommends that a tide gate study be conducted and tide gate improvements be implemented based on the results of the study. The CIP IDs of these projects are COSI-SW-2026-001 and COSI-SW-2026-002, respectively.

The model also showed that all six street crossings over Mill Creek—C, E, F, G, H, and Altenau streets—would flood during a 100-year peak flow, a basis of analysis used in the FEMA FIS (FEMA, 2020). The Mill Creek MOIP also modeled two proposed flood mitigation alternatives, including upsizing the culvert crossings and adding bypass. The selected improvements were split into lower and upper Mill Creek as two capital improvement projects, with CIP numbers of COSI-SW-2026-003 and COSI-SW-2026-004, respectively. The scopes of these two proposed capital improvement projects are included in Table 3-2.

Table 3-2. Proposed improvements on Mill Creek culverts

| Mill Creek Section<br>(CIP ID)         | Street  | Proposed culvert size, type, and length                          |
|----------------------------------------|---------|------------------------------------------------------------------|
| Lower Mill Creek<br>(COSI-SW-2026-003) | G       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 96 ft long  |
|                                        | H       | 12 ft wide × 5 ft high 3-sided concrete box culvert, 81 ft long  |
|                                        | Altenau | 12 ft wide × 5 ft high 3-sided concrete box culvert, 95 ft long  |
| Upper Mill Creek<br>(COSI-SW-2026-004) | C       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 45 ft long  |
|                                        | E       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 67 ft long  |
|                                        | F       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 118 ft long |

#### 3.4.2 E Street Basin

The model showed existing capacity constraints in pipes near the E Street outfall under a 10-year peak flow (Figure 3-4 existing conditions profile). Persistent flooding observed at the parking lot northeast of 1st Street was also caused by a pipe collapse identified in a previous CCTV inspection, but this collapse was not modelled.

A proposed scenario was modeled to replace the broken pipe and upsize downstream pipes to improve capacity, as shown in Table 3-3 and Figure 3-5. The profile of the proposed conditions in Figure 3-4 show flooding reduced in parking lot and along E

Street outfall. The improvements shown are included in the CIP as COSI-SW-2026-005 (F Street NE of 1st Street Flooding and E Street Outfall Improvements).

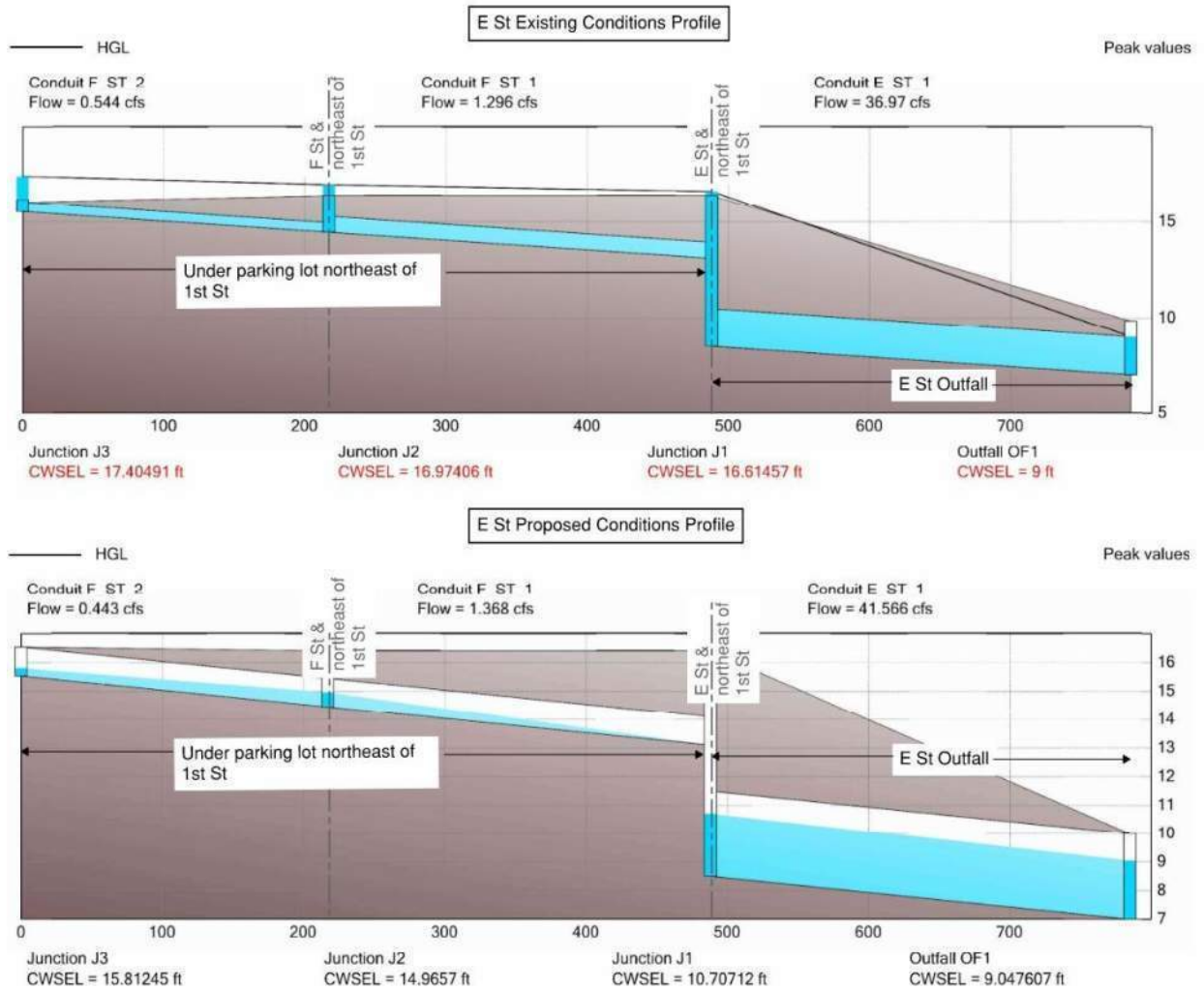
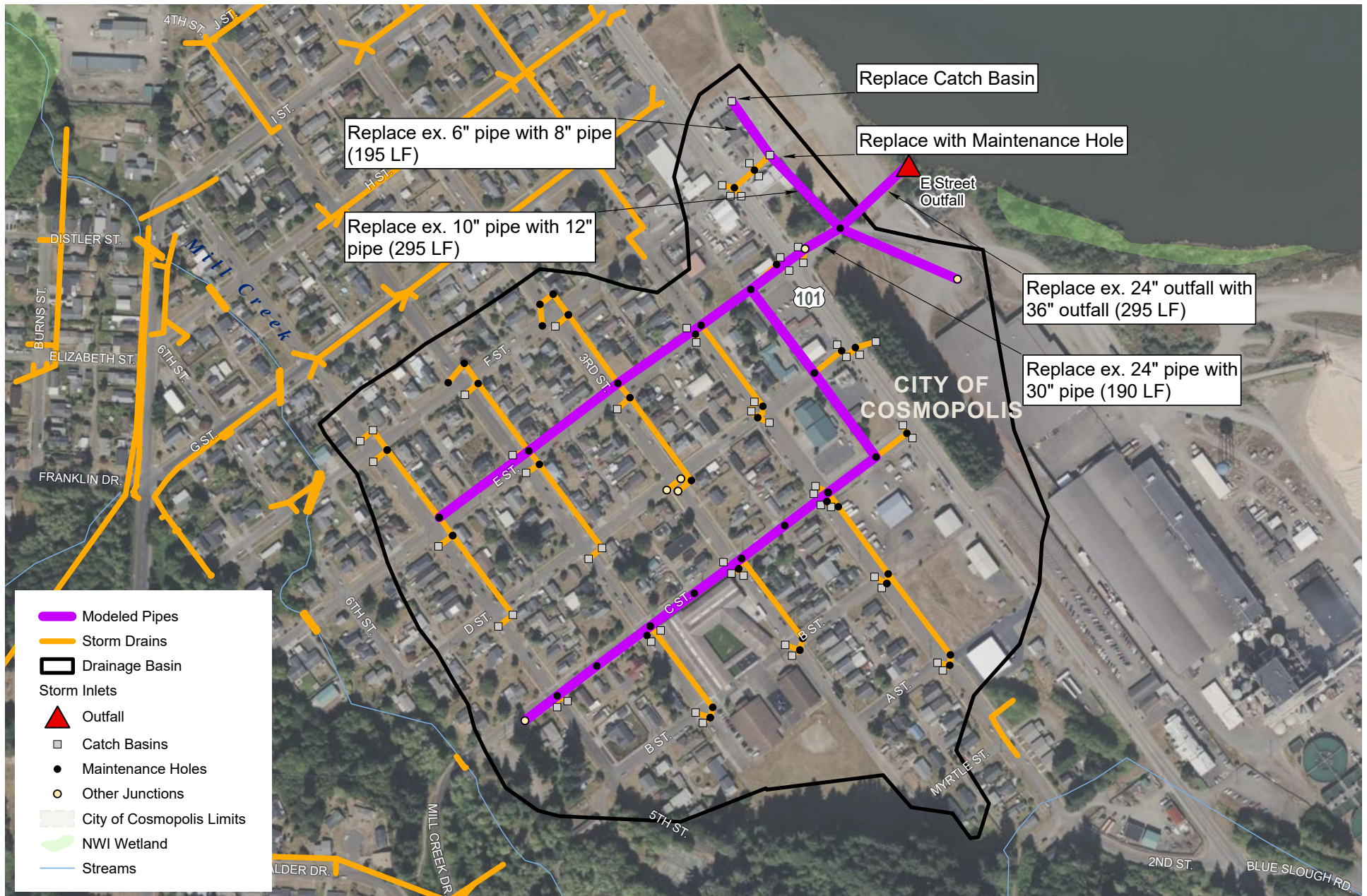


Figure 3-4. Profile of E Street basin existing and proposed conditions

Table 3-3. Proposed improvements in E Street basin

| Location                | Existing pipe diameter (in) | New pipe diameter (in) | Pipe length (LF) | Other improvements   |
|-------------------------|-----------------------------|------------------------|------------------|----------------------|
| E Street outfall        | 24                          | 36                     | 295              | --                   |
| E Street and 1st Street | 24                          | 30                     | 190              | --                   |
| F Street parking lot    | 6                           | 8                      | 195              | --                   |
| F Street parking lot    | 10                          | 12                     | 295              | --                   |
| F Street parking lot    | --                          | --                     | --               | Replace catch basins |



### 3.4.3 2nd Street Basin

The model showed capacity constraints in the 2nd Street outfall and in pipes on J Street under a 10-year peak flow as a result of the flat terrain along J Street (Figure 3-6 existing conditions profile). Survey showed that the pipes on J Street were sloped at around 0.1 percent. These flat conditions resulted in backwater conditions for upstream pipes.

A proposed scenario was modeled to show that replacing pipes near the Lions Club and along J Street with larger pipes and steeper slopes could relieve flooding along J Street, as listed in Table 3-4 and as shown in Figure 3-7. The profile of the proposed conditions in Figure 3-6 show flooding reduced along J Street. These improvements are included in the CIP as “J St. at 4th St. Flooding & 2nd St. Outfall Improvements” (COSI-SW-2026-006).

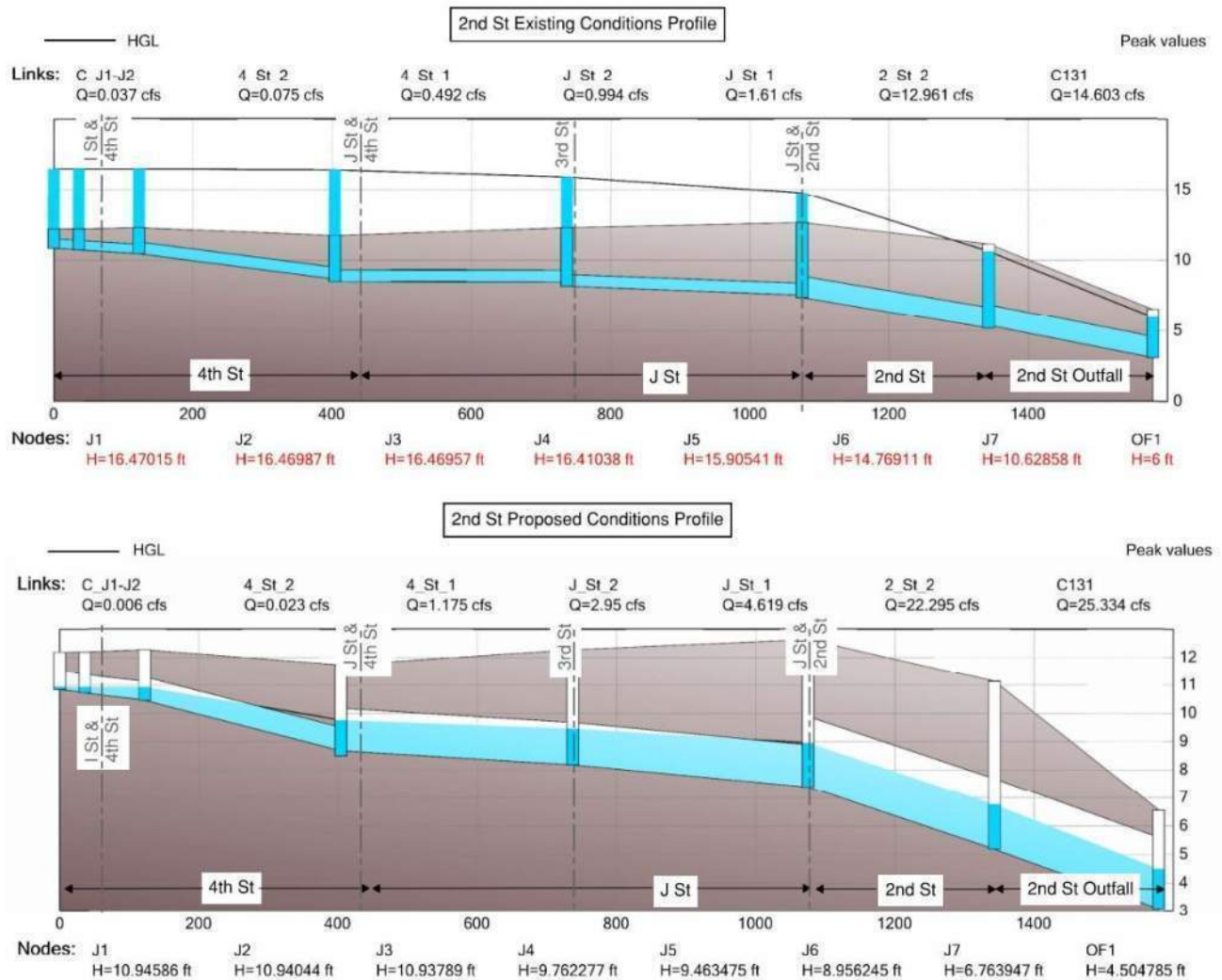
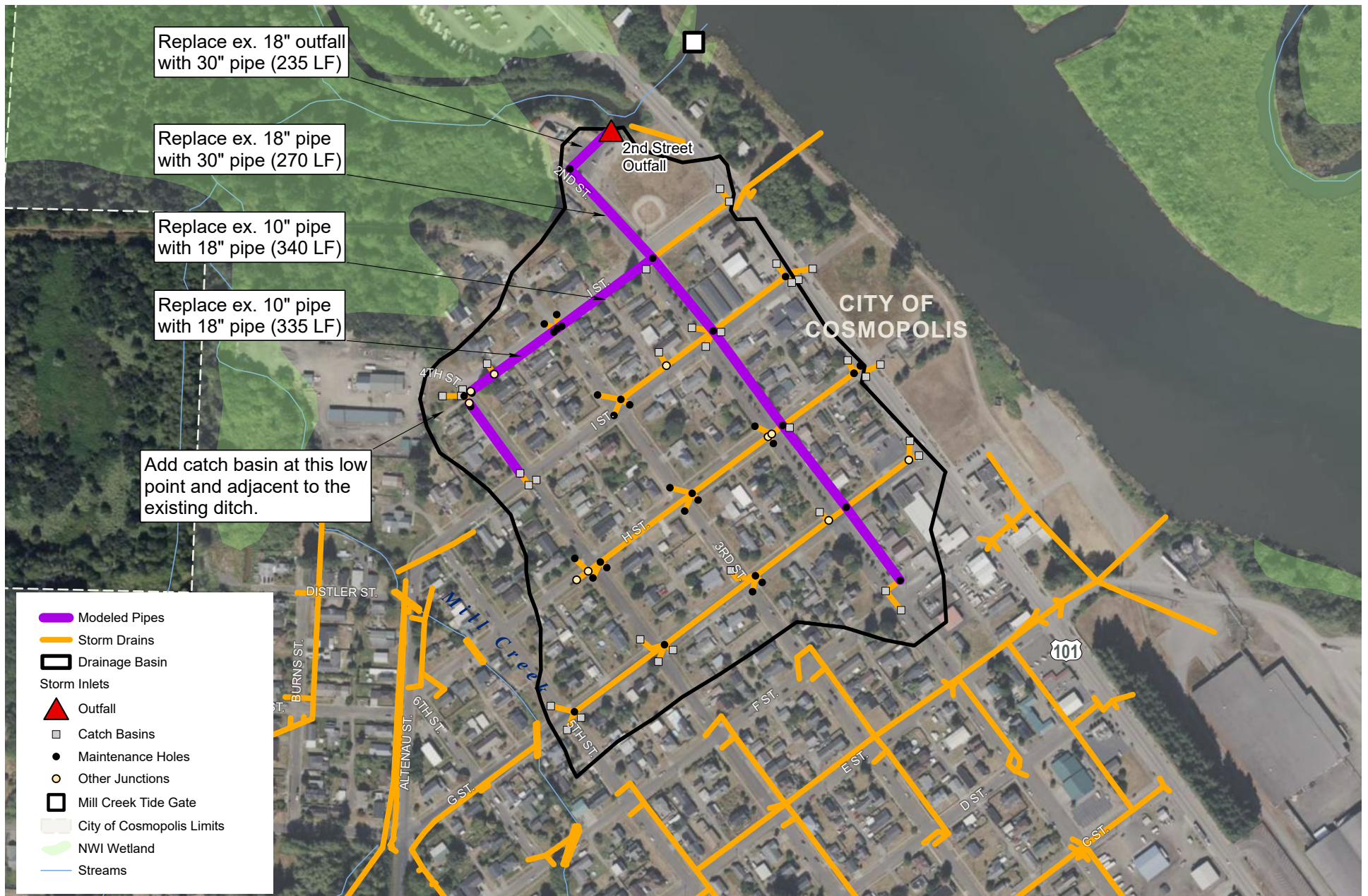


Figure 3-6. Profile of 2nd Street basin existing and proposed conditions

**Table 3-4. Proposed improvements in 2nd Street basin**

| Location                | Existing pipe diameter (in) | New pipe diameter (in) | Pipe length (LF) | Other improvements                |
|-------------------------|-----------------------------|------------------------|------------------|-----------------------------------|
| 2nd Street outfall      | 18                          | 30                     | 235              | --                                |
| 2nd Street and J Street | 18                          | 30                     | 270              | Abandon existing pipe and replace |
| J Street and 3rd Street | 10                          | 18                     | 340              | Reset pipe slope                  |
| J Street and 4th Street | 10                          | 18                     | 335              | Reset pipe slope                  |
| J Street and 4th Street | --                          | --                     | --               | New catch basins                  |



## 3.5 Chapter Summary

The H&H modeling analysis from the Mill Creek MOIP showed that all six culverts are currently undersized. The analysis within the E Street and 2nd Street Basins identified capacity constraints. As identified in Table 3-3 and Table 3-4, several segments in the E Street and 2nd Street basins, respectively, would need to be replaced with larger pipes to reduce flooding. The costs of these proposed solutions are estimated in Chapter 4.

## 4 Capital Improvement Plan

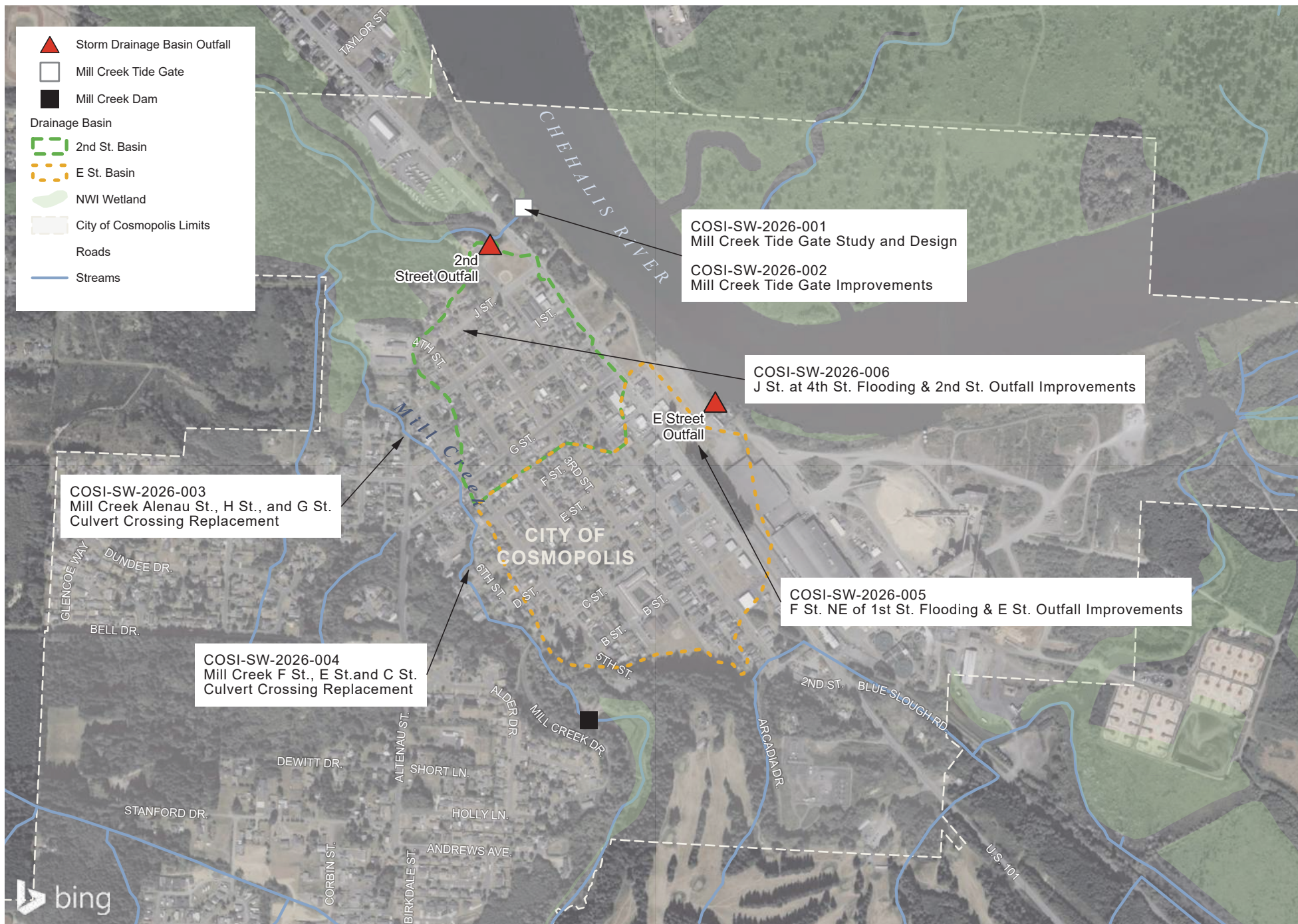
A capital improvement plan (CIP) is a strategic planning tool used to address deficiencies in the City's stormwater system and guide long-term investment in infrastructure. As a part of this SWCP, the improvements proposed in Chapter 3 and the Mill Creek MOIP (Appendix B) were grouped and assigned project numbers. These projects have been evaluated and ranked based on a set of criteria that reflect the City's priorities. These priorities include, but are not limited to, reducing flooding, improving system performance, and supporting community resilience.

### 4.1 Identified Capital Improvement Projects

H&H modeling analyses in Chapter 3 evaluated several flood reduction solutions along Mill Creek and across downtown. Hydraulic modeling of Mill Creek indicated that all six culverts are undersized and that the system is highly sensitive to the downstream water surface elevation (WSE). These conditions may be alleviated through tide gate operation or targeted infrastructure improvements. For the two localized flooding areas, hydraulic modeling showed that multiple pipes are capacity-constrained, causing backup and flooding in the system. A summary of all identified CIPs are provided in Table 4-1 and are shown in Figure 4-1.

**Table 4-1. Summary of proposed CIPs**

| Basin                             | Project Number           | Project Name                                                                   |
|-----------------------------------|--------------------------|--------------------------------------------------------------------------------|
| Mill Creek Culvert Drainage Basin | <b>COSI-SW-2026-001</b>  | Mill Creek Tide Gate Study and Design                                          |
|                                   | <b>COSI-SW-2026-002</b>  | Mill Creek Tide Gate Improvements                                              |
|                                   | <b>COSI-SW-2026-003:</b> | Mill Creek Altenau Street, H Street, and G Street Culvert Crossing Replacement |
|                                   | <b>COSI-SW-2026-004</b>  | Mill Creek F Street, E Street, and C Street Culvert Crossing Replacement       |
| E Street Basin                    | <b>COSI-SW-2026-005</b>  | F Street Northeast of 1st Street Flooding and E Street Outfall Improvements    |
| 2nd Street Basin                  | <b>COSI-SW-2026-006</b>  | J Street at 4th Street Flooding and 2nd Street Outfall Improvements            |



## 4.2 CIP Prioritization Approach

To help prioritize these capital projects, five criteria were developed to assess each project's impact to various City's needs and regulatory requirements. Each project was assessed based on these criteria and assigned a score (0-4). Additionally, each criterion was assigned a weight that signifies the importance of that category relative to the others. The categories and their weighting factors are shown in Table 4-2.

CIP projects were assigned a prioritization score by multiplying the criteria score by the weight of the criteria. The CIP project with the higher total weighted score has higher priority for being implemented. Using these criteria scores, prioritization scores were calculated for each project following the following calculation:

$$\begin{aligned} \text{Priorization Score} \\ &= \text{Flooding Score} + \text{Regulatory Score} + \text{Capacity Score} \\ &+ \text{Reliability Score} + \text{Environmental Score} \end{aligned}$$

The final prioritization scores can be found in Table 4-3. Additional details on this process are also provided in Appendix C.

**Table 4-2. CIP prioritization criteria**

| Criteria Category  | Description                                                                                                                                  | Scoring (0-4)                                                                                                                      | Weight (0-1) |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Flooding Impact    | How often and how severely an area floods, including how widespread the flooding is and the level of damage it causes when it happens.       | Areas with multiple neighborhoods flooding or potential high damage costs due to flooding receive a higher score.                  | 0.25         |
| Regulatory Drivers | How much a project helps meet regulatory requirements, especially related to fish passage.                                                   | Barriers located farther downstream in a watershed affect a larger portion of the watershed and therefore receive higher priority. | 0.23         |
| Capacity           | How limited the existing infrastructure is at handling current or future flows.                                                              | Systems that are already undersized, or that cause more damage when they fail, receive higher priority.                            | 0.21         |
| Reliability        | How dependable the infrastructure is, including how long it is expected to last and how much maintenance is required to keep it functioning. | Infrastructure with higher maintenance needs or shorter remaining life has a higher score.                                         | 0.20         |
| Environmental      | The project's impact on water quality benefits.                                                                                              | Projects that provide a great water quality benefit receive a higher score.                                                        | 0.11         |

**Table 4-3. CIP prioritization scores**

| CIP Project Name                                                               | Reliability Score | Capacity Score | Flooding Score | Regulatory Score | Environmental Score | Raw Score | Weighted Score |
|--------------------------------------------------------------------------------|-------------------|----------------|----------------|------------------|---------------------|-----------|----------------|
| Mill Creek Tide Gate Study and Design                                          | 2                 | 4              | 4              | 4                | 3                   | 2.83      | 3.49           |
| Mill Creek Tide Gate Improvements                                              | 2                 | 4              | 4              | 4                | 2                   | 2.67      | 3.38           |
| Mill Creek Altenau Street, H Street, and G Street Culvert Crossing Replacement | 2                 | 4              | 4              | 3                | 2                   | 2.50      | 3.15           |
| Mill Creek F Street, E Street, and C Street Culvert Crossing Replacement       | 2                 | 3              | 3              | 2                | 2                   | 2.00      | 2.46           |
| F Street Northeast of 1st Street Flooding and E Street Outfall Improvements    | 2                 | 2              | 2              | 0                | 1                   | 1.17      | 1.43           |
| J Street at 4th Street Flooding and 2nd Street Outfall Improvements            | 1                 | 2              | 2              | 0                | 1                   | 1.00      | 1.23           |



## 4.3 CIP Cost Opinions Development

Project cost estimates are based on 2026 dollars with 2 percent annual inflation until the assumed construction start year. The estimates are planning-level Association for the Advancement of Cost Engineering (AACE) Class 5 estimates, useful for setting budgets. Actual costs may vary within a range of plus 100 percent to minus 50 percent and increase with inflation over time. The estimates contain the following elements:

- **Construction costs:** cost of materials and installation
- **Construction contingency:** 30 percent of direct and indirect project costs
- **Allied costs (engineering, administration, legal financing and construction administration):** approximately 30 percent of project costs; varies based on project complexity factors established in the estimate inputs

Total project costs are presented in Table 4-4.

## 4.4 CIP Project Ranking and Summaries

Based on the scoring criteria and weighting factors described in Section 4.3, proposed projects were rated and ranked and are listed in priority order in Table 4-4. Project rankings indicate a recommended implementation order, but the CIP remains flexible and can be updated as conditions, funding, or priorities evolve.

**Table 4-4. CIP project summary table**

| Recommended improvement project                                       | Project ID       | Priority | Planned construction year | Project cost (CIP year USD) |
|-----------------------------------------------------------------------|------------------|----------|---------------------------|-----------------------------|
| Mill Creek Tide Gate Study and Design                                 | COSI-SW-2026-001 | 1        | 2028                      | \$769,300                   |
| Mill Creek Tide Gate Improvements                                     | COSI-SW-2026-002 | 2        | 2029                      | \$4,172,800                 |
| Mill Creek Altenau St., H St., and G St. Culvert Crossing Replacement | COSI-SW-2026-003 | 3        | 2030                      | \$8,998,300                 |
| Mill Creek F St., E St. and C St. Culvert Crossing Replacement        | COSI-SW-2026-004 | 4        | 2035                      | \$8,681,600                 |
| F St. NE of 1st St. Flooding and E St. Outfall Improvements           | COSI-SW-2026-005 | 5        | 2036                      | \$1,986,400                 |
| J St. at 4th St. Flooding and 2nd St. Outfall Improvements            | COSI-SW-2026-006 | 6        | 2038                      | \$3,408,700                 |

Project summary sheets were developed for each of the recommended improvement projects and are provided in Appendix D. Project summary sheets include a high-level scope of work for the project along with initial geotechnical, utilities, permits, and real estate and easement considerations. These items will be further evaluated during preliminary design. See Figure 4-1 for an overview map of CIP projects.

### 4.4.1 Mill Creek Improvements Interdependency

Mill Creek is an important area for the City's stormwater management, as it has a history of significant flood damage during major storm events. Four of the highest-ranked

projects focus on flood reduction along the creek. The hydraulic modeling performed in the Mill Creek MOIP (Appendix B) indicates that Mill Creek is strongly influenced by the downstream water surface elevation. As a result, the Mill Creek Tide Gate Study and Design (COSI-SW-2026-001) and Mill Creek Tide Gate Improvements (COSI-SW-2026-002) are ranked as the highest priorities.

The Mill Creek Tide Gate Study and Design (COSI-SW-2026-001), including survey and modeling, is needed to understand how the existing operations may mitigate flooding in upstream basins, both during low- and high-tide scenarios. The study will also evaluate alternatives and develop high-level cost estimates for these proposed solutions, which may include improving the tide gate geometry and adding a pump station. The subsequent Mill Creek Tide Gate Improvements project (COSI-SW-2026-002) will implement the preferred alternative from the tide gate study to reduce flooding along Mill Creek. For this SWCP's planning purpose, it was assumed that tide gates would be replaced, but a pump station would not be added.

The Mill Creek MOIP efforts identified Alternative A, replacing all six culverts, as the best alternative for addressing Mill Creek flooding. Alternative A was split into two projects for the CIP. The two Mill Creek Culvert replacement projects will replace the three downstream culverts (COSI-SW-2026-003) and then the three upstream culverts (COSI-SW-2026-004) to increase capacity and reduce flooding along Mill Creek.

The improved operations at tide gates will likely lower the water surface elevation in Mill Creek during flood events, which could also reduce flooding at Mill Creek culvert crossings and at 4th and J streets (COSI-SW-2026-006). In this way, this CIP project ranking presents potential cost-saving opportunities on future capital improvement projects within Mill Creek's drainage basin.

#### 4.4.2 Downtown Improvements

The two lower-ranked projects address system deficiencies that cause localized flooding identified by the City during staff interviews. F Street Northeast of 1st Street Flooding and E Street Outfall Improvements (COSI-SW-2026-005) will reduce flooding that has consistently been seen in the back parking lot of the Chevron gas station. J Street at 4th Street Flooding and 2nd Street Outfall Improvements (COSI-SW-2026-006) will reduce flooding at the intersection of J and 2nd streets

### 4.5 Chapter Summary

This chapter converts the modeling results and analysis into a prioritized list of six capital projects focused on flood risk reduction. The highest-priority investments target Mill Creek, starting with a tide gate study and improvements, followed by phased replacement of all six creek crossings. Targeted downtown projects address repeat flooding near F Street and 1st Street and J Street and 4th Street. Individual project costs range from approximately \$769,000 to \$9.0 million per project and are projected to cost an average of \$2.8 million over the next 10 years.

## 5 Financial Plan

This chapter evaluates the financial capacity of the City's stormwater utility to support ongoing operations and planned capital improvements. It analyzes existing rates, projected operating costs, and future capital needs to determine whether current revenues are sufficient and to identify potential rate adjustments necessary to ensure long-term system sustainability.

As identified in this plan and acknowledged by the City, flood control capital improvements are a high priority. A significant portion of the proposed capital projects are related to flood control. The City's primary strategy for funding these projects is through grant opportunities. Securing grant funding is critical, as stormwater rates would need to increase substantially if grant funding were not available.

An important consideration when pursuing grants is that many require a local matching contribution. Therefore, the City must have readily available funds to serve as matching funds when grant opportunities arise. In addition, the City needs to begin building its reserve fund balance to support renewal and replacement (R&R) projects necessary to keep the stormwater system operating effectively. These factors combined underscore the need for modest rate increases, which will allow the City to build fund balances over time, provide required grant matching funds, and adequately fund R&R projects.

### 5.1 Legal Considerations

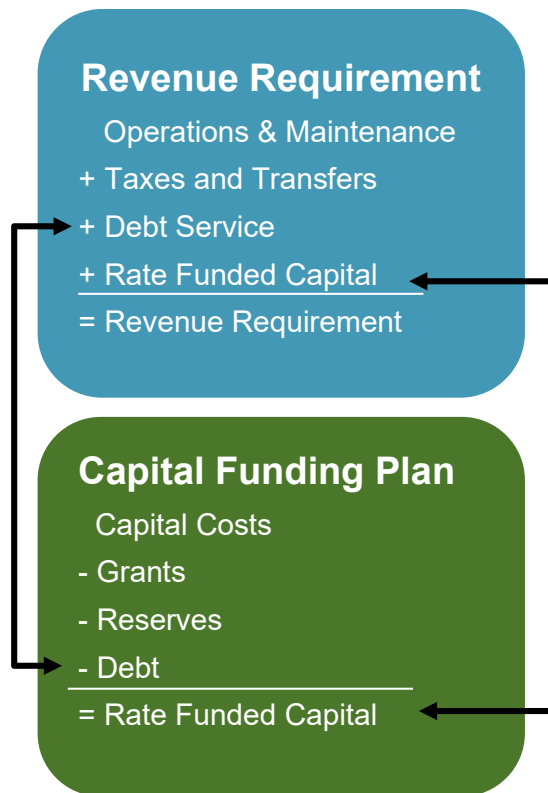
Revised Code of Washington (RCW) 35.92 provides cities the authority to operate public utilities, including stormwater systems, and to set rates sufficient to cover operations, capital costs and debt obligations associated with operating the utility. RCW 90.03.525 limits stormwater rates charged to the Washington State Department of Transportation (WSDOT) for highway right-of-way to 30 percent of comparable stormwater rates and also requires an annual expenditure plan demonstrating that the revenue collected is spent appropriately. Due to this legal limitation, many cities do not charge WSDOT stormwater rates for right-of-way since that would mean the City would have to charge themselves for their roadways. Given these limitations, it is not recommended the City impose stormwater rates on WSDOT.

### 5.2 Rate Study Approach

A revenue requirement analysis was conducted to compare total utility costs, including operations and maintenance (O&M), capital investment, taxes, transfers, and potential debt service—to existing rate revenues. The analysis determines the adequacy of current rates and informs development of a rate transition plan to align revenues with projected costs over time.

The revenue requirement was developed concurrently with a capital funding plan, recognizing the iterative relationship between capital timing, funding sources, and rate impacts. Where rate increases are significant, the capital funding plan may be adjusted through the use of grants, reserves, debt, or project deferral to reduce near-term rate impacts, consistent with City policies and financial objectives.

This approach is illustrated in Figure 5-1.



**Figure 5-1. Rate study approach and breakdown**

## 5.2.1 Revenue Requirement Analysis

### Operations and Maintenance

O&M costs include labor, benefits, fuel, professional services, insurance, and routine system maintenance, including Diking District–related activities. Cost projections are based on historical expenditures and the adopted budget. The 2026 O&M budget totals \$44,391, with future costs escalated at an average inflation rate of approximately 4.2 percent.

### Taxes and Transfers

Stormwater utilities in Washington State are subject to the Business and Occupation (B&O) tax under RCW 82.04.290, which applies to service and other activities. This tax is structured as a tiered rate: entities with less than \$1 million in gross revenue in the previous calendar year are taxed at 1.5 percent, while those with gross revenue exceeding \$1 million are taxed at 1.75 percent.

In addition, the City levies a 5 percent utility tax on stormwater revenues, which is dedicated to the equipment replacement reserve in accordance with municipal code.

For purposes of this analysis, taxes are excluded from both revenues and expenditures in the budget and financial projections. For utilities that do not incorporate taxes directly into revenue or expenditure budgeting, care should be taken to ensure that customer rates are set at levels sufficient to recover these taxes, either by embedding them within

the rates above what are presented in this chapter or presenting them as a separate line item on customer bills.

The stormwater utility currently operates as a single fund and does not make routine interfund transfers.

### **Debt Service**

The stormwater utility currently carries no outstanding debt. While some utilities avoid borrowing, the use of low-interest loans can support capital delivery while promoting intergenerational equity by aligning costs with the customers who benefit from the infrastructure over time.

### **Rate-Funded Capital**

Rate-funded capital represents direct annual investment in the stormwater system and is essential to asset preservation and regulatory compliance. Industry best practices recommend funding capital at least at the level of annual depreciation, with higher levels required to fully offset inflation, system expansion, and regulatory-driven improvements. Adjustments to the level of rate-funded capital are a key tool for managing rate impacts. Rate funded capital plays a dual role by appearing in both the revenue requirement and the capital funding plan, making it the primary lever for managing rate impacts and financial sustainability.

## **5.2.2 Capital Funding Plan**

The capital funding plan identifies planned stormwater projects and available funding sources, including grants, reserves, debt, and rate-funded capital. Annual capital costs are required to be fully offset by funding sources. The capital projects included in this capital funding plan, as shown in Table 5-1, are identified in Chapter 4.

Grant availability plays a significant role in project timing, and some projects may be deferred if external funding is unavailable. Where rate-funded capital requirements are excessive, projects may be rescheduled or reprioritized to maintain affordability while meeting regulatory and system performance objectives.

The capital plan includes both R&R projects as well as system improvement projects. It should be noted that while certain grant programs the City anticipates pursuing may allow funding for R&R activities, such funding is often limited or not consistently available. As a result, reliance on grants alone may not be sufficient to sustain an appropriate level of renewal and replacement of infrastructure.

Given this constraint, the City should gradually increase the rate-funded portion of capital to better support R&R needs. Building additional rate capacity for capital funding will position the City to implement a more proactive R&R program, reducing the risk of system failures and avoiding higher long-term costs associated with reactive repairs.

**Table 5-1. Capital funding plan (in \$1,000 dollars)**

|                                                                    | 2027       | 2028         | 2029           | 2030           | 2031           | 2032           | 2033        | 2034        | 2035           | 2036           | 2037           | 2038           |
|--------------------------------------------------------------------|------------|--------------|----------------|----------------|----------------|----------------|-------------|-------------|----------------|----------------|----------------|----------------|
| <b>Capital Projects</b>                                            |            |              |                |                |                |                |             |             |                |                |                |                |
| Mill Creek Tide Gate Study and Design                              | \$0        | \$462        | \$308          | \$0            | \$0            | \$0            | \$0         | \$0         | \$0            | \$0            | \$0            | \$0            |
| Mill Creek Tide Gate Improvements                                  | 0          | 0            | 3,577          | 596            | 0              | 0              | 0           | 0           | 0              | 0              | 0              | 0              |
| Mill Creek Alenau St., H St., & G St. Culvert Crossing Replacement | 0          | 0            | 0              | 3,599          | 3,599          | 1,800          | 0           | 0           | 0              | 0              | 0              | 0              |
| Mill Creek F St., E St. & C St. Culvert Crossing Replacement       | 0          | 0            | 0              | 0              | 0              | 0              | 0           | 0           | 3,473          | 3,473          | 1,736          | 0              |
| F St. NE of 1st St. Flooding & E St. Outfall Improvements          | 0          | 0            | 0              | 0              | 0              | 0              | 0           | 0           | 0              | 1,324          | 662            | 0              |
| J St. at 4th St. Flooding & 2nd St. Outfall Improvements           | <u>0</u>   | <u>0</u>     | <u>0</u>       | <u>0</u>       | <u>0</u>       | <u>0</u>       | <u>0</u>    | <u>0</u>    | <u>0</u>       | <u>0</u>       | <u>0</u>       | <u>.272</u>    |
| <b>Total Capital Projects</b>                                      | <b>\$0</b> | <b>\$462</b> | <b>\$3,884</b> | <b>\$4,195</b> | <b>\$3,599</b> | <b>\$1,800</b> | <b>\$0</b>  | <b>\$0</b>  | <b>\$3,473</b> | <b>\$4,797</b> | <b>\$2,398</b> | <b>\$2,272</b> |
|                                                                    |            |              |                |                |                |                |             |             |                |                |                |                |
| Funds Retained for future Capital Project                          | \$0        | \$21         | \$22           | \$23           | \$24           | \$25           | \$26        | \$27        | \$28           | \$29           | \$30           | \$31           |
|                                                                    |            |              |                |                |                |                |             |             |                |                |                |                |
| <b>Total Capital Costs</b>                                         | <b>\$0</b> | <b>\$483</b> | <b>\$3,906</b> | <b>\$4,218</b> | <b>\$3,623</b> | <b>\$1,825</b> | <b>\$26</b> | <b>\$27</b> | <b>\$3,501</b> | <b>\$4,826</b> | <b>\$2,428</b> | <b>\$2,303</b> |
| <b>Capital Funding</b>                                             |            |              |                |                |                |                |             |             |                |                |                |                |
| Reserves                                                           | \$0        | \$0          | \$0            | \$0            | \$0            | \$0            | \$0         | \$0         | \$0            | \$0            | \$0            | \$0            |
| Grants                                                             | 0          | 462          | 3,884          | 4,195          | 3,599          | 1,800          | 0           | 0           | 3,473          | 4,797          | 2,398          | 2,272          |
| Bonds                                                              | 0          | 0            | 0              | 0              | 0              | 0              | 0           | 0           | 0              | 0              | 0              | 0              |
| Low Interest Loans                                                 | 0          | 0            | 0              | 0              | 0              | 0              | 0           | 0           | 0              | 0              | 0              | 0              |
| Rate Funded Capital                                                | <u>0</u>   | <u>21</u>    | <u>22</u>      | <u>23</u>      | <u>24</u>      | <u>25</u>      | <u>26</u>   | <u>27</u>   | <u>28</u>      | <u>29</u>      | <u>30</u>      | <u>31</u>      |
| <b>Total Capital Funding</b>                                       | <b>\$0</b> | <b>\$483</b> | <b>\$3,906</b> | <b>\$4,218</b> | <b>\$3,623</b> | <b>\$1,825</b> | <b>\$26</b> | <b>\$27</b> | <b>\$3,501</b> | <b>\$4,826</b> | <b>\$2,428</b> | <b>\$2,303</b> |

From the capital funding plan, rate-funded capital is used in the revenue requirement analysis and rates must be set to recover this cost in the year it occurs. The debt assumption in the capital funding plan also is used in the revenue requirement in the form of debt service, or debt payments; however, this is no proposed debt service during the planning period.

### Grants and Loans

Table 5-2 provides a brief description of available grants and loans for Washington State stormwater utilities.

**Table 5-2. Available grant and loan opportunities**

| Program                                                          | Funding Type                                   | Administering Agency | Eligible Stormwater Uses                                                                                      | Notes:                                                                                                                              |
|------------------------------------------------------------------|------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Clean Water State Revolving Fund (CWSRF)</b>                  | Low-interest loans; some principal forgiveness | U.S. EPA / Ecology   | Stormwater facilities, retrofits, green infrastructure, planning, design, construction                        | Below-market interest rates; repayment up to 30 years; competitive; not for O&M; often paired with grants                           |
| <b>Centennial Clean Water Program</b>                            | Grants and loans                               | Ecology              | Stormwater retrofits, nonpoint source projects, planning, design                                              | State-funded; grants primarily for financially distressed communities or nonpoint projects; competitive and biennial appropriations |
| <b>Clean Water Act Section 319 Program</b>                       | Grants                                         | U.S. EPA / Ecology   | Nonpoint source pollution control, green infrastructure, urban runoff treatment                               | Requires watershed-based plan; generally, up to 60% federal share; no loan repayment; supplemental funding only                     |
| <b>Stormwater Financial Assistance Program (SFAP)</b>            | Grants                                         | Ecology              | Municipal stormwater retrofits, planning, design, construction                                                | State-funded program targeted specifically to stormwater; often paired with other Ecology funding sources; competitive              |
| <b>Community-Based Public-Private Partnership (CBP3) Program</b> | Planning and implementation grants             | Ecology              | Performance-based stormwater retrofit programs, alternative procurement                                       | Supports feasibility, RFP development, and pilot projects; not a construction funding source by itself; emphasizes outcomes         |
| <b>Section 319 + Centennial (Combined Use)</b>                   | Grants (blended match)                         | Ecology              | Nonpoint source stormwater and water-quality projects                                                         | Centennial funds are often used as match for Section 319 grants through Ecology's combined funding process                          |
| <b>Office of Chehalis Basin (OCB)</b>                            | Grant                                          | Ecology              | Stormwater Projects including Conveyance, Flood mitigation, Detention, Tide Gates, Replacement/rehabilitation | Typically, large discrete projects that focus on public safety, environmental and climate resilience                                |

### **Existing Revenue**

The stormwater utility is funded exclusively through rate revenue, budgeted at approximately \$70,000 annually for this analysis. Future revenue projections assume no customer growth over the 10-year horizon. Existing revenue reflects collections prior to any future rate adjustments.

### **Revenue Requirement Results**

The revenue requirement is calculated by combining operations and maintenance (O&M) costs and transfer assumptions, with rate-funded capital needs identified in the capital funding plan. The existing rate revenue requirements are shown in Table 5-3.

### **Rate Transition Planning**

A rate transition plan is developed within the revenue requirement analysis to gradually align revenues with projected operating and capital costs. The plan will consider rate stability, affordability, reserve targets, and adopted financial policies. The revenue requirement analysis yielded a rate transition plan of 5 percent for the next 5 years and then inflationary adjustments, 2 percent, thereafter. An example of such rate adjustment is proposed in Table 5-3.

**Table 5-3. Financial plan (in \$1,000 dollars)**

|                                           | Budget |        | Projected |        |        |        |        |         |         |         |         |         |         |         |
|-------------------------------------------|--------|--------|-----------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
|                                           | 2025   | 2026   | 2027      | 2028   | 2029   | 2030   | 2031   | 2032    | 2033    | 2034    | 2035    | 2036    | 2037    | 2038    |
| <b>Revenue with no Rate Adjustments</b>   | \$61   | \$70   | \$70      | \$70   | \$70   | \$70   | \$70   | \$70    | \$70    | \$70    | \$70    | \$70    | \$70    | \$70    |
|                                           |        |        |           |        |        |        |        |         |         |         |         |         |         |         |
| O&M                                       | \$41   | \$44   | \$46      | \$47   | \$49   | \$50   | \$52   | \$54    | \$55    | \$57    | \$59    | \$61    | \$63    | \$65    |
| Capital Funded From Rates                 | 0      | 0      | 0         | 21     | 22     | 23     | 24     | 25      | 26      | 27      | 28      | 29      | 30      | 31      |
| Debt Service                              | 0      | 0      | 0         | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Taxes and Transfers                       | 0      | 0      | 0         | 0      | 0      | 0      | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| <b>Total Revenue Requirement</b>          | \$41   | \$44   | \$46      | \$68   | \$71   | \$73   | \$76   | \$79    | \$81    | \$84    | \$87    | \$90    | \$93    | \$96    |
|                                           |        |        |           |        |        |        |        |         |         |         |         |         |         |         |
| Cumulative Balance (Deficiency)           | \$20   | \$26   | \$24      | \$2    | (\$1)  | (\$3)  | (\$6)  | (\$9)   | (\$11)  | (\$14)  | (\$17)  | (\$20)  | (\$23)  | (\$26)  |
| <b>% Cumulative Balance (Deficiency)</b>  | 33.2%  | 36.6%  | 34.6%     | 2.5%   | -1.2%  | -4.8%  | -8.6%  | -12.4%  | -16.4%  | -20.4%  | -24.5%  | -28.7%  | -33.0%  | -37.4%  |
|                                           |        |        |           |        |        |        |        |         |         |         |         |         |         |         |
| <b>Rate Revenue Adjustment</b>            |        |        | 5.0%      | 5.0%   | 5.0%   | 5.0%   | 5.0%   | 2.0%    | 2.0%    | 2.0%    | 2.0%    | 2.0%    | 2.0%    | 2.0%    |
| Revenue from Rate Adjustment              |        |        | \$4       | \$7    | \$11   | \$15   | \$19   | \$21    | \$23    | \$25    | \$27    | \$29    | \$31    | \$33    |
|                                           |        |        |           |        |        |        |        |         |         |         |         |         |         |         |
| <b>Typical Single Family Monthly Bill</b> |        | \$7.83 | \$8.22    | \$8.63 | \$9.06 | \$9.52 | \$9.99 | \$10.19 | \$10.40 | \$10.60 | \$10.82 | \$11.03 | \$11.25 | \$11.48 |
| <b>Annual \$ Change in Monthly Bill</b>   |        |        | \$0.39    | \$0.41 | \$0.43 | \$0.45 | \$0.48 | \$0.20  | \$0.20  | \$0.21  | \$0.21  | \$0.22  | \$0.22  | \$0.23  |

## 5.3 Reserve Fund Balance

An important consideration in revenue requirement analysis is the level of available cash reserves, as reported in bars in Figure 5-2. Cash reserves serve multiple purposes, and utilities often maintain separate reserve funds for different needs. While it is common to establish both an operating reserve fund and a capital reserve fund, this is not a strict requirement. For smaller utilities, such as the City's stormwater utility, a single reserve fund is typically sufficient. It is important to ensure that this single reserve fund adequately supports both operational and capital needs.

Operating reserve minimums are commonly benchmarked at levels ranging from 30 to 180 days of operations and maintenance (O&M) expenditures. The appropriate number of days should reflect factors such as the timing of revenue collections and expenditure cycles. For example, utilities that bill customers on a bimonthly basis generally require higher reserve levels than those that bill monthly.

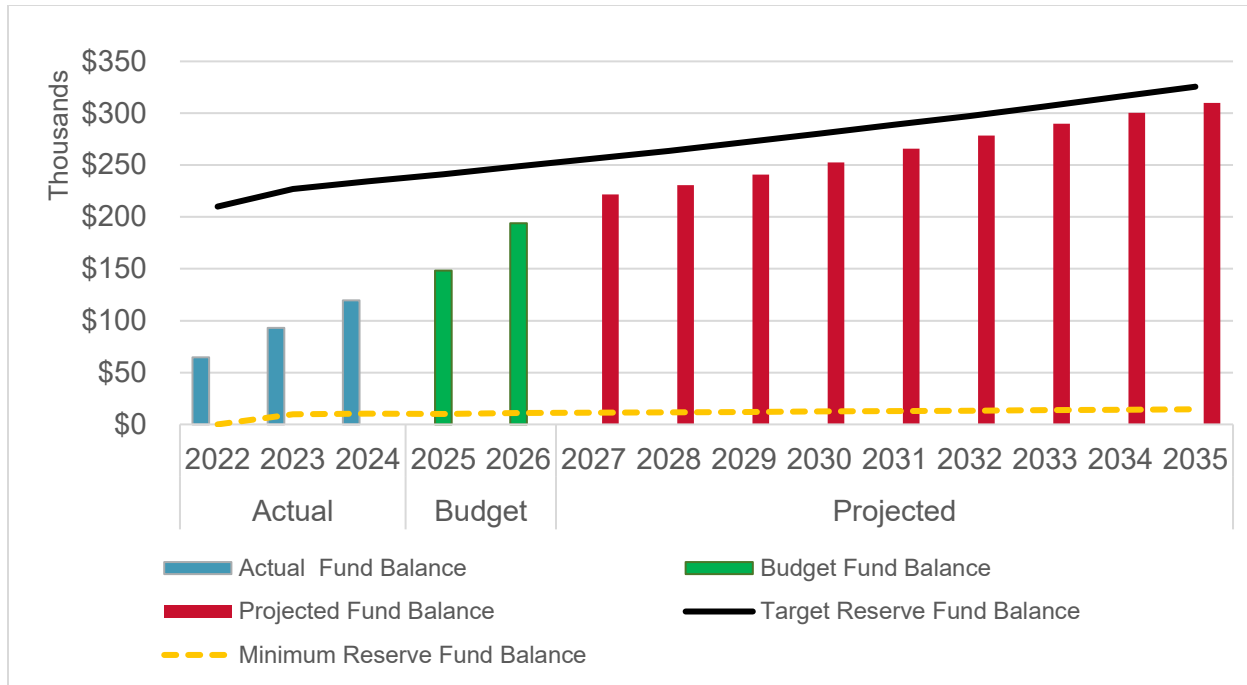
Capital reserves are often based on defined targets, such as a 10-year average of capital expenditures or estimated annual R&R costs. However, for this analysis, a full 10-year average would be unnecessarily high given the current capital improvement plan (Chapter 4) and the expectation that most projects will be funded through grants. Additionally, R&R costs are not yet fully established. An asset management plan, which would include developing these R&R costs, will be recommended as a part of this SWCP.

An important consideration for the City related to renewal and replacement is the scale of ongoing capital needs. Based on the 10-year capital plan totaling approximately \$28 million and assuming an average asset useful life of 50 years, the implied annual depreciation would exceed \$500,000 per year. This highlights the level of sustained funding required to maintain system assets over time.

Accordingly, as presented in, this analysis assumes a **minimum reserve fund balance** (yellow dashed line) equal to 90 days of O&M expenditures and a **target reserve balance** (solid black line) equal to 90 days of O&M expenditures plus 10 percent of the 10-year average capital plan costs, escalated at 3 percent. A 90-day operating reserve is considered sufficient to address normal business cycle variability and unexpected operational cash flow needs. The capital reserve component provides a prudent starting point for accumulating funds to support capital projects not funded through grants. In Figure 5-2, the blue and green bars represent actual and estimated fund balances provided by the City. The red bars represent the increase in fund balance as unused funds are added to the reserve fund.

The distinction between the minimum and target reserve levels is important. Over the planning horizon, the reserve balance should be maintained at or trending toward the target level. It is expected that the fund balance will fluctuate annually as reserves are drawn down and replenished to support capital expenditures.

The minimum reserve fund balance, by contrast, serves as a threshold that triggers evaluation of whether rate adjustments or other financial actions are necessary to restore the fund balance to an acceptable level.



**Figure 5-2. Reserve fund balance analysis**

Minimum Reserve Fund Balance = 90 Days O&M

Target Reserve Fund Balance = minimum reserve fund balance plus 10 percent of average annual capital costs

## 5.4 Existing Rates

The City currently employs a two-tier flat monthly stormwater rate based on parcel size:

- Parcels  $\leq$  20,000 square feet
- Parcels  $>$  20,000 square feet

**Table 5-4. Historic stormwater rates**

|                                                  | 2022   | 2023   | 2024   | 2025   | 2026   |
|--------------------------------------------------|--------|--------|--------|--------|--------|
| <b>Stormwater Rates</b>                          |        |        |        |        |        |
| Parcels less than or equal to 20,000 square feet | \$7.00 | \$7.16 | \$7.37 | \$7.56 | \$7.83 |
| Parcels greater than 20,000 square feet          | 14.00  | 14.33  | 14.74  | 15.12  | 15.71  |

Rates have been increased annually based on the June-to-June Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), as required by City code. This automatic inflationary adjustment is a sound financial practice that helps maintain purchasing power.

While the parcel-based structure broadly reflects differences in service demand, it can result in inequities among customers with similar impervious surface areas but different parcel sizes. Because impervious area is more directly correlated to stormwater runoff and cost of service, many stormwater utilities have transitioned to impervious-surface-based rate structures. This issue is identified for future consideration but does not change the rate study methodology used in this chapter.

## 5.5 Proposed Rates

Based on the revenue requirement analysis, proposed future rate were developed and are shown below.

**Table 5-5. Historic stormwater rates**

|                              | Current 2026 | 2027    | 2028    | 2029    | 2030    | 2031    |
|------------------------------|--------------|---------|---------|---------|---------|---------|
| Parcels ≤ 20,000 square feet | \$7.83       | \$8.22  | \$8.63  | \$9.06  | \$9.52  | \$9.99  |
| \$ Change per Month          |              | 0.39    | 0.41    | 0.43    | 0.45    | 0.48    |
| Parcels > 20,000 square feet | \$15.71      | \$16.50 | \$17.32 | \$18.19 | \$19.10 | \$20.05 |
| \$ Change per Month          |              | \$0.79  | \$0.82  | \$0.87  | \$0.91  | \$0.95  |

The above rates are assuming the same rate structure as the City currently uses.

An issue that exists with the current rate structure is the bill charged to each customer is not necessarily proportional to the impact to the stormwater system. This is because a customer is charged either one rate if their parcel is less than 20,000 square feet and another if it is greater than 20,000 square feet. That means that a customer who has a parcel of 20,001 square feet is charged the same rate as a customer with 200,000 square feet despite the second parcel being ten times the size of the first parcel.

An alternative rate structure could be based on an average single family residential parcel, which is commonly used by stormwater utilities to better align rates with service demand. Under this approach, an average single family parcel is assumed to be 12,000 square feet, and all single family customers would be charged a uniform rate equivalent to that parcel size, regardless of their actual parcel size. This alternative rate structure better reflects the proportional impact of larger parcels than the current rate structure.

Non-single family parcels would be billed based on the number of single family “equivalent units” they represent. There are two common methods for calculating these equivalents:

### Whole Unit Method

Each non-single family parcel is charged in whole units, with a minimum of one unit. For example, a parcel with an area of 13,000 square feet would be billed as two single family units, since it exceeds the 12,000 square foot threshold.

### Fractional Unit Method

Parcels are billed based on their actual size relative to the average single family parcel. Using the same example, a 13,000 square foot parcel divided by 12,000 square feet equals 1.08 units, so the customer would be billed 1.08 single family units times the applicable stormwater rate. While this method is more precise, many utilities still apply a minimum charge of one full unit.

Table 5-6 illustrates these alternative rate structures. The rates shown are based on County parcel data and assume an annual revenue target of \$73,500.

**Table 5-6. Alternative rate structures**

|                         | 2027   | 2028   | 2029   | 2030   | 2031   |
|-------------------------|--------|--------|--------|--------|--------|
| <b>Whole Units</b>      |        |        |        |        |        |
| Single Family Unit      | \$5.88 | \$6.17 | \$6.48 | \$6.81 | \$7.15 |
| \$ Change per Month     |        | 0.29   | 0.31   | 0.33   | 0.34   |
| <b>Fractional Units</b> |        |        |        |        |        |
| Single Family Unit      | \$5.99 | \$6.28 | \$6.60 | \$6.93 | \$7.27 |
| \$ Change per Month     |        | 0.29   | 0.32   | 0.33   | 0.34   |

Using the whole unit method, a customer with a 13,000 square-foot parcel would pay  $2 \times \$5.88$ , or \$11.76 per month (2027 rate). Under the fractional unit method, the same customer would be charged  $1.08 \times \$5.99$ , or \$6.46 per month.

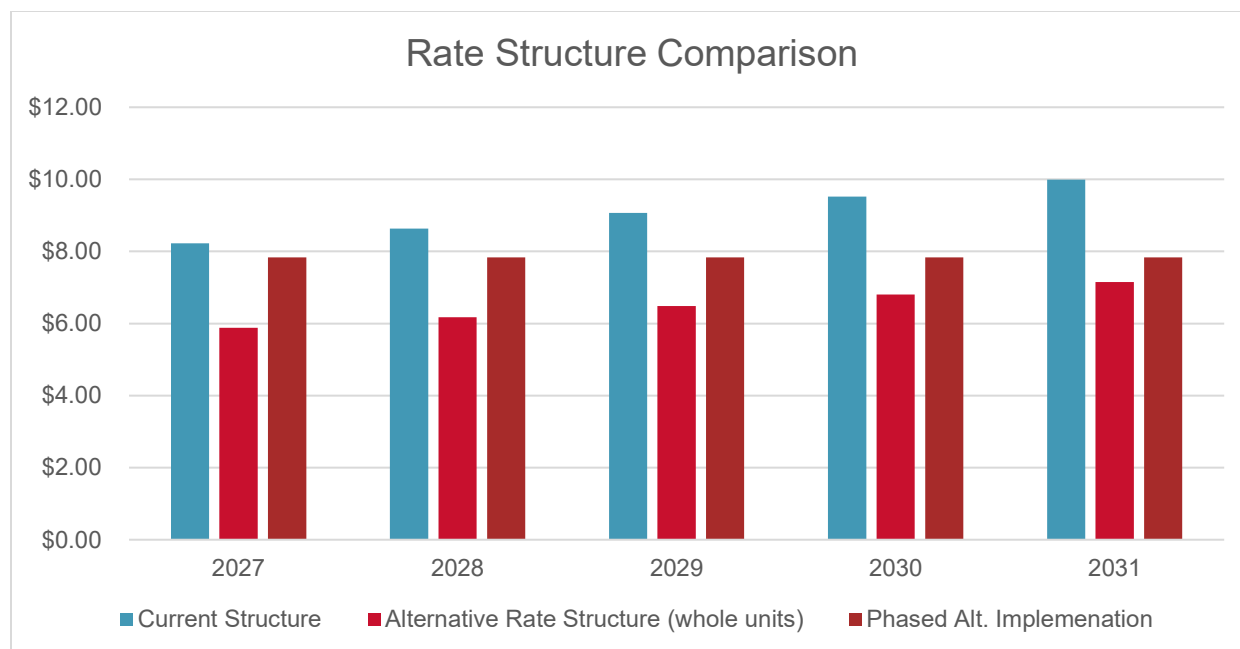
For single-family parcels, this approach would generally result in lower monthly bills, reducing the typical charge from \$7.83 to approximately \$5.88–\$5.99, with potentially greater reductions for parcels larger than 20,000 square feet.

Impacts to non-single-family parcels would vary depending on parcel size. The average non-single-family parcel is approximately 71,967 square feet, which would result in a monthly bill of approximately \$35.28 under the fractional unit method and \$35.89 under the whole unit method—an increase from the current flat rate of \$15.71 per month.

It should be noted that, although the unit rates decrease under the alternative rate structures, total revenue is projected to remain consistent with the revenue requirement. This is because non-single-family parcels are charged based on increments of 12,000 square feet of parcel area, resulting in higher total charges for larger parcels. The broader distribution of charges across larger properties offsets the lower unit rates and maintains overall revenue levels.

One potential implementation strategy the City could consider is maintaining the current rate for single-family parcels while transitioning to the alternative rate structure. Under this approach, the single-family rate would remain unchanged for the next five years, meaning most single-family customers would not experience rate increases during that period. For non-single-family parcels, rates would be adjusted to the calculated unit costs under the alternative structures, with a minimum bill set equal to the single-family rate.

If implemented, this approach would likely result in total revenues exceeding those shown in the revenue requirement analysis, while providing rate stability for single-family customers. This strategy may help ease the transition to a more equitable rate structure while gradually increasing revenue capacity. The impacts to single-family parcels under the current structure, the alternative structure, and the scenario in which single-family rates remain unchanged for five years are illustrated in Figure 5-3.



**Figure 5-3. Impact of rate structure changes on single-family rates**

As the chart illustrates, the current rate structure increases steadily on an annual basis. In contrast, the alternative rate structure shows a decrease in the first year, followed by gradual increases in subsequent years.

The phased alternative implementation, on the other hand, remains flat over the initial five-year period. Over time, the alternative rate structure begins to converge with the phased approach as increases are applied in later years.

The alternative rate structures above were calculated using parcel data taken from Grays Harbor County GIS files.

## 5.6 Financial Policies

### Reserve Fund Guidelines

Operating reserves are used to maintain cash flow, respond to emergencies, mitigate revenue disruptions, and smooth the funding of capital expenditures. Reserve policies typically define minimum, target, and maximum balance thresholds.

Minimum operating reserves are commonly expressed in terms of days of operations and maintenance (O&M) expenditures, with approximately 45 days typical for utilities with monthly billing cycles. Utilities that do not maintain a separate capital reserve fund may require higher operating reserve levels to support both operational and capital needs. Maximum reserve balances are often capped between 180 and 365 days of O&M, depending on funding practices and the extent to which debt financing is utilized.

The target reserve balance, which falls between the minimum and maximum levels, represents an optimal funding level. This target is intended to cover O&M requirements, provide a buffer for emergencies, and set aside funds for future capital investments. The portion of reserves allocated to capital will depend on the City's policies related to debt financing and the availability of grant funding.

For example, if the City's policy were to avoid debt financing and grant funding were unavailable, it may be appropriate to maintain capital reserves equal to the 10-year average of projected capital expenditures. However, for the City, it is anticipated that the majority of future capital projects will be funded through grants. As a result, a lower capital reserve component is appropriate, such as 10 percent of the 10-year average capital costs, as outlined in the Reserve Fund section of this chapter.

### **Debt Policy**

Debt is often viewed negatively; however, for utilities with significant infrastructure investment needs, the strategic use of debt can provide important financial and equity-related benefits. One such benefit is the principle of intergenerational equity, which holds that it is more equitable to spread the cost of long-lived capital assets across both current and future utility customers. By financing capital improvements through debt and repaying that debt with rate revenues over time, the costs of infrastructure investments are aligned with the customers who benefit from those assets throughout their useful lives. When used appropriately, debt can also help reduce the need for large, near-term rate increases by spreading capital costs over multiple years.

Adoption of a formal debt policy provides guidance for the prudent use of borrowing and supports sound financial management. Such a policy typically limits debt issuance to capital projects with long service lives, prioritizes the use of low-interest or subsidized financing where available, and establishes thresholds or limits on debt service relative to revenues. A clearly defined debt policy helps ensure that borrowing decisions are consistent with long-term financial sustainability while maintaining rate stability and equity among customer generations.

### **Debt Service Coverage**

Debt service coverage ratios are commonly used to evaluate a utility's financial capacity and creditworthiness. A minimum coverage ratio of 1.25 is frequently required by lenders and bond covenants, meaning that net revenues must exceed annual debt service obligations by at least 25 percent after accounting for operation and maintenance costs, taxes, and required transfers.

While such a policy is not directly applicable to cities without outstanding debt, adoption of a minimum debt service coverage ratio establishes a prudent financial framework for future financing. If the City were to issue debt in the future, having an established coverage policy in place would provide clear guidance for rate setting, support financial stability, and enhance the City's readiness to access capital markets.

### **Consumer Price Index-Based Rate Adjustments**

The City's Municipal Code Section 13.65.050(3) provides for annual Consumer Price Index (CPI)-based adjustments to stormwater rates and states:

"The above rates shall take effect on January 1, 2022. Thereafter, the monthly stormwater rates shall be increased on an annual basis, effective January 1st of each subsequent year, based upon a percentage which corresponds with the CPI-W All Urban Consumers, June to June index, for that year."

Adjusting utility rates using an inflation index such as the CPI is a recommended best practice and should be continued. Regular inflationary adjustments help prevent gradual erosion of purchasing power and reduce the need for infrequent, larger rate increases.

However, the City should periodically reassess its stormwater rates and adjust as necessary to realign revenues with actual utility costs. CPI measures changes in consumer prices and may not adequately reflect inflationary pressures specific to utility operations, such as labor costs, construction and materials pricing, regulatory compliance requirements, and capital replacement needs. As a result, reliance on CPI alone may lead to revenues that do not keep pace with utility cost growth over time. Periodic rate resets in excess of CPI-based adjustments may therefore be necessary to maintain long-term financial sustainability.

In addition, the City could consider amending the municipal code to establish lower and upper bounds on annual inflation-based rate adjustments. Many jurisdictions include provisions specifying that the annual CPI adjustment shall not be less than zero percent nor exceed a defined maximum, commonly five percent. Establishing such bounds provides predictability and stability for customers while preserving the City's ability to apply inflation-based adjustments that support financial sustainability and limit excessive year-to-year rate volatility.

### **One-Time Revenues**

One-time revenues should not be used to fund ongoing operations. These revenues are best applied to non-recurring expenses, reserves, or capital projects to avoid future structural deficits.

### **Capital Funding Targets**

Establishing a target level of rate-funded capital investment is critical to maintaining system condition, minimizing long-term lifecycle costs, and reducing future rate volatility. Several methods may be used to determine an appropriate level of rate-funded capital. One approach is to target annual capital funding equal to annual depreciation expense, or a multiple thereof. However, using depreciation as a benchmark requires knowledge of the system's annual depreciation expense. Many cities in Washington operate on a cash basis of accounting and do not calculate or report depreciation annually, meaning this information may not be readily available.

An alternative approach is to adopt a policy that targets rate funding for a reasonable and sustainable level of system renewal and replacement. Under this method, the City would first estimate the total replacement cost of the stormwater system and then divide that amount by an assumed average useful life to determine an annualized R&R funding target. Establishing such a policy-based funding target helps ensure that rates provide sufficient ongoing support for capital reinvestment, even in the absence of formal depreciation accounting, and supports long-term financial sustainability.

## **5.7 Chapter Summary and Conclusions**

This Stormwater Management Rate Study evaluates the City's ability to financially sustain stormwater operations and deliver planned capital improvements over the long term. The analysis compares existing and projected revenues to operating costs, capital

needs, and policy requirements, with a particular focus on funding high-priority flood mitigation projects.

### **Recommended Actions**

- Pursue grant funding to improve the system while minimizing impacts to customer rates.
- Phase in rate adjustments that support multiple objectives:
  - Provide local matching funds for grants
  - Build funding capacity for a proactive R&R program
  - Establish and maintain adequate financial reserves for emergencies
- Conduct a rate study approximately every five years to align revenues with inflation and evolving cost drivers.
- Consider revising the City's stormwater rate structure to better reflect proportional system impacts.

Flood mitigation improvements represent the majority of planned capital investments. The City's primary funding strategy relies on securing grants; however, most grant programs require local matching funds and sufficient cash availability to execute projects. In addition, the stormwater utility must build reserves to support the ongoing renewal and replacement of aging infrastructure. Without these financial resources particularly grant funding stormwater rates would need to increase significantly to fully fund capital needs through user charges alone.

The revenue requirement analysis indicates that absent rate adjustments, expenditures for operations and modest levels of rate-funded capital will exceed revenues over time, resulting in structural deficits. Operations and maintenance costs are projected to rise steadily due to inflation, while increased rate-funded capital will be necessary to support grant leveraging, preserve existing assets, and meet industry best practices.

A phased rate transition plan is recommended to address these financial pressures while maintaining affordability and rate stability. The analysis supports annual rate increases of 5 percent for five years, followed by ongoing adjustments at approximately the rate of inflation (about 2 percent annually). This approach allows the utility to gradually align revenues with costs, build reserve balances, generate funding for grant matches, and reduce financial risk over time.

The City should also consider restructuring the stormwater rate to better align the cost of service with customer impact. This could include implementing a rate structure that scales based on parcel size or impervious area, ensuring a more equitable distribution of costs.

## 6 Recommended Next Steps

Based on the analysis completed to date on this system, HDR has compiled the following recommendations for the City's consideration:

- Continue pursuing external grant funding for projects identified in the CIP.
- Develop an asset management plan for the City's stormwater infrastructure. The plan may include the following components:
  1. A complete asset inventory to understand the number of assets the City owns and where they are geographically.
  2. Condition assessment of all City stormwater assets to identify the need for maintenance and/or replacement.
  3. An R&R cost model based on known and/or estimate asset condition and asset replacement schedule. This will help the City calculate the target reserve fund balance.
- Consider adjusting the City's stormwater rates and rate structure to build the operational and capital reserves for proactive asset management and to better reflect proportional system impacts
- Implement recommended customer engagement activities for overburdened communities to ensure ample outreach and increase public support.

## 7 References

U.S. Census Bureau

2024 American Community Survey 5-Year Estimates

City of Cosmopolis, WA

2024 Code of Ordinances

Office of Chehalis Basin

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U.S. Fish & Wildlife Services

2024 National Wetland Inventory (NWI)

Washington Department of Fish and Wildlife (WDFW)

2025 *Chehalis Basin Strategy*. Olympia, WA. <https://wdfw.wa.gov/species-habitats/habitat-recovery/chehalis-basin-strategy>

2026 Fish Passage Inventory. Accessed March 25, 2026. Washington Department of Archaeology and Historic Preservation (DAHP)

2025 Cultural Resource Risk Assessment Model

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# Appendix A. Overburdened Community Assessment

As part of the SWCP, the City seeks to establish an engagement process inclusive of overburdened communities, who may experience disproportionate environmental harms and risks. Many of these communities face high flooding risks in the downtown basins and along Mill Creek.

This chapter details the methodology for the overburdened community assessment and identifies community engagement opportunities for stormwater planning, flood outreach and capital improvement. The results from this assessment will support external funding applications for the City of Cosmopolis.

## A.1 Assessment Objectives and Scope

The overburdened communities are defined as minority, low-income, tribal, or indigenous populations or geographic locations in Washington State. These communities often suffer most from infrastructure failure and unintended consequences of environmental disasters. Although the City is not covered by Ecology's MS4 Permit, the Permit serves as a framework for including overburdened communities in engagement activities around stormwater planning. This is particularly salient for the lower Chehalis basin, as communities in the City has faced flooding concerns along Mill Creek and in downtown area, and as capital investments outpace the rate at which infrastructure degrades. A well-informed engagement process could create opportunities for public involvement and help shape the identity of Cosmopolis, and revitalize the sense of community in Cosmopolis.

The permit defines overburdened communities as:

...minority, low-income, tribal, or indigenous populations or geographic locations in Washington State that potentially experience disproportionate environmental harms and risks. This disproportionality can be a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors.

Increased vulnerability may be attributable to an accumulation of negative or lack of positive environmental, health, economic, or social conditions within these populations or places. The term describes situations where multiple factors, including both environmental and socio-economic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.

This overburdened community assessment for Cosmopolis was also developed concurrently for the cities of Aberdeen and Hoquiam.

## A.2 Indicator Development

On June 24, 2025, community representatives from the cities of Aberdeen, Hoquiam, and the City met to determine the barriers to community engagement that are most relevant to their cities. The following eight potential barriers were identified and used to complete a detailed demographic analysis:

- |                  |                         |           |
|------------------|-------------------------|-----------|
| 1. Economics     | 2. Seniors              | 3. Health |
| 4. Language      | 5. Mobility             | 6. Tribal |
| 7. Digital Usage | 8. Community Facilities |           |

Findings from the community assessment informed recommended outreach strategies.

## A.3 Community Assessment and StoryMap

To accomplish an engagement process inclusive of overburdened communities, a community analysis was performed to better understand Cosmopolis at the citywide and Census Tract levels of detail.

This analysis, which is hosted in a publicly available [Esri StoryMap](#), provides statistical and spatial analyses of the Cosmopolis community. This interactive format allows users to explore information relevant to the eight themes or potential barriers to participation listed above. With this approach, users can better understand *where* overburdened communities are most likely to live and *why* they are overburdened. The StoryMap includes introductory information, a four-page infographic PDF summarizing the City, and detailed descriptions of the eight indicators, which are listed below.

### A.3.1 Community Demographics Overview

The City is home to approximately 2,301 residents. The average household size in Cosmopolis is 2.4 people. There are 895 total housing units, 86% of which are detached homes, and six percent are mobile homes. Nineteen percent of housing units are renter-occupied, with a countywide median rent of \$846. Approximately 81% are owner-occupied, with a median home value of \$280,700. Most households moved into their current homes between 2000 and 2009.

The median age is 44.0, with about one third (34%) of households including a person under the age of 18, and one third (33%) including someone age 65 or older. Of the 778 households, 30% include at least one person with a disability.

Within Cosmopolis, 8% of households live below the poverty level, and the median household income is an estimated \$80,132. Additionally, 8% of households do not have internet access and 10% of renter households do not have a vehicle.

#### 1. Economics:

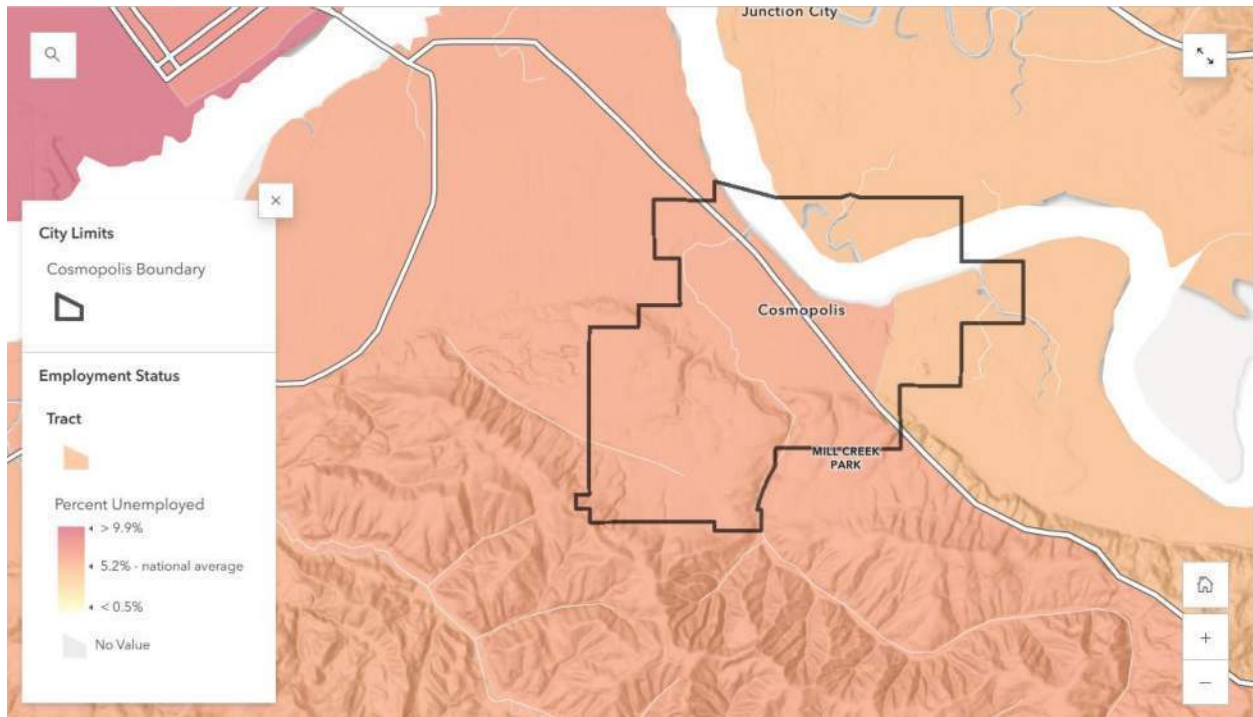
##### 1A. *Employment*

**Data Source:** [2023 \(5-yr\) ACS Employment Status](#)

Understanding employment trends helps identify if communities are facing ongoing challenges with unemployment. Populations facing unemployment are overburdened and should be particularly targeted for messaging.

Among the three cities, Cosmopolis faces the highest percentage of unemployed residents at 9%. There are approximately 612 employees and 31 businesses within Cosmopolis. Manufacturing, retail trade, and healthcare/social assistance are the top three employment industries.

Top employers include the Cosmopolis School District, Highland Golf Course, NOR-CAT and Advanced Heating and Air.



**Figure A-1. City of Cosmopolis 2023 (5-year) ACS employment status**

### 1B: Poverty

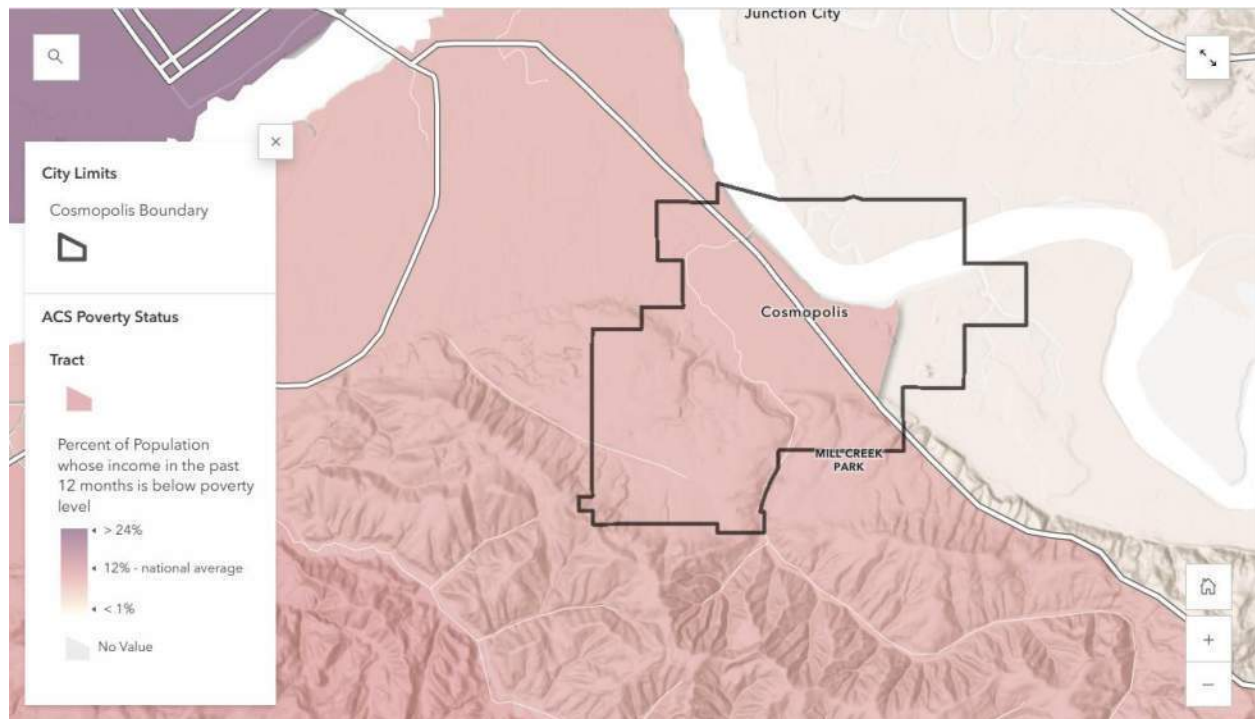
**Data Source:** [2023 \(5-yr\) ACS Poverty Status](#)

Identifying low-income communities is important to target messaging to those populations.

In Cosmopolis, the median household income is \$80,132. For householders age 65 and older, the median income drops by 39% to \$54,167.

Approximately 8% of households have incomes below the poverty level. Census Tract 9 has the highest poverty rate at 8%; Tract 8 has the lowest rate at 4%.

An estimated 2% of households receive public assistance income, and 13% are enrolled in the Supplemental Nutrition Assistance Program (SNAP).



**Figure A-2. City of Cosmopolis 2023 (5-year) ACS poverty status**

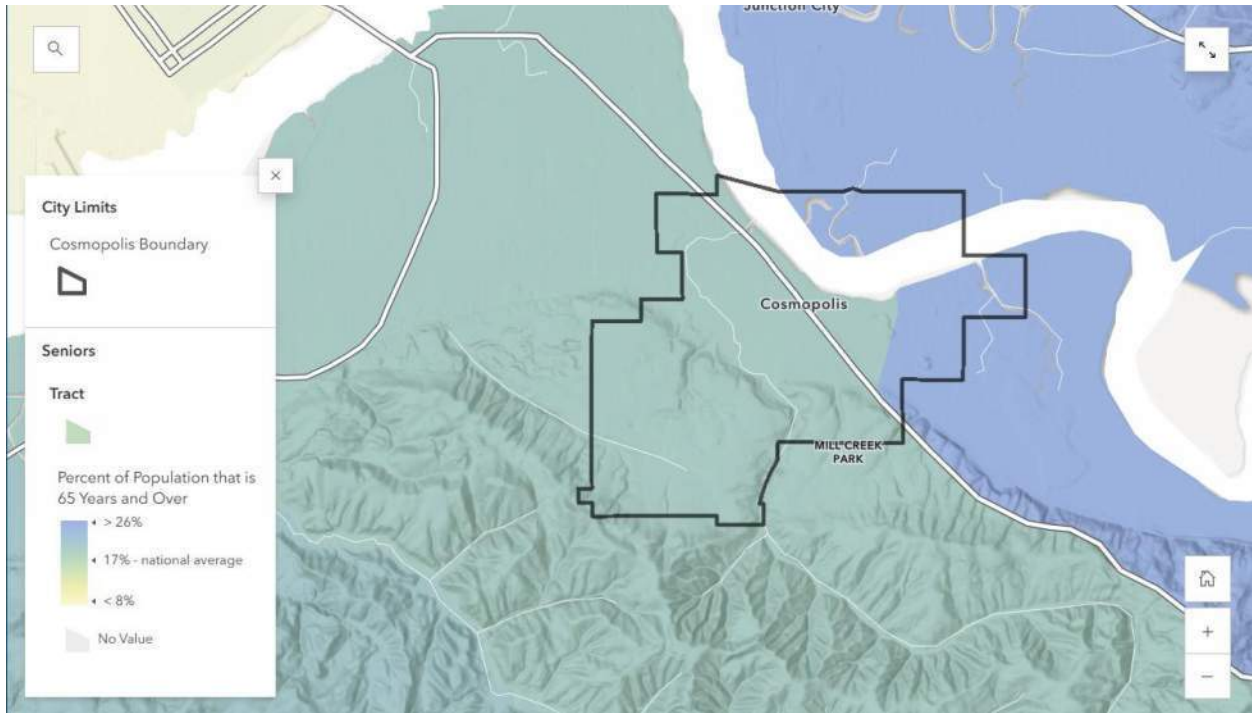
## 2. Seniors

**Data Source:** [2023 \(5-yr\) ACS Context for Senior Well-Being](#)

Understanding the age distribution of a community is an essential first step in identifying its challenges and needs. It is also critical for informing an effective issue-focused engagement strategy. When evaluating age, it is also important to consider complimentary metrics such as health, mobility, income, and employment. These variables can help determine whether or not older populations are overburdened.

In Cosmopolis, 33% of households include someone aged 65 or older – 9% lower than the county average - and 15% of single-person households are seniors.

Tract 8 has the highest proportion of residents aged 65 and older (43%). 25% of these seniors live alone.



**Figure A-3. City of Cosmopolis 2023 (5-year) ACS senior wellbeing status**

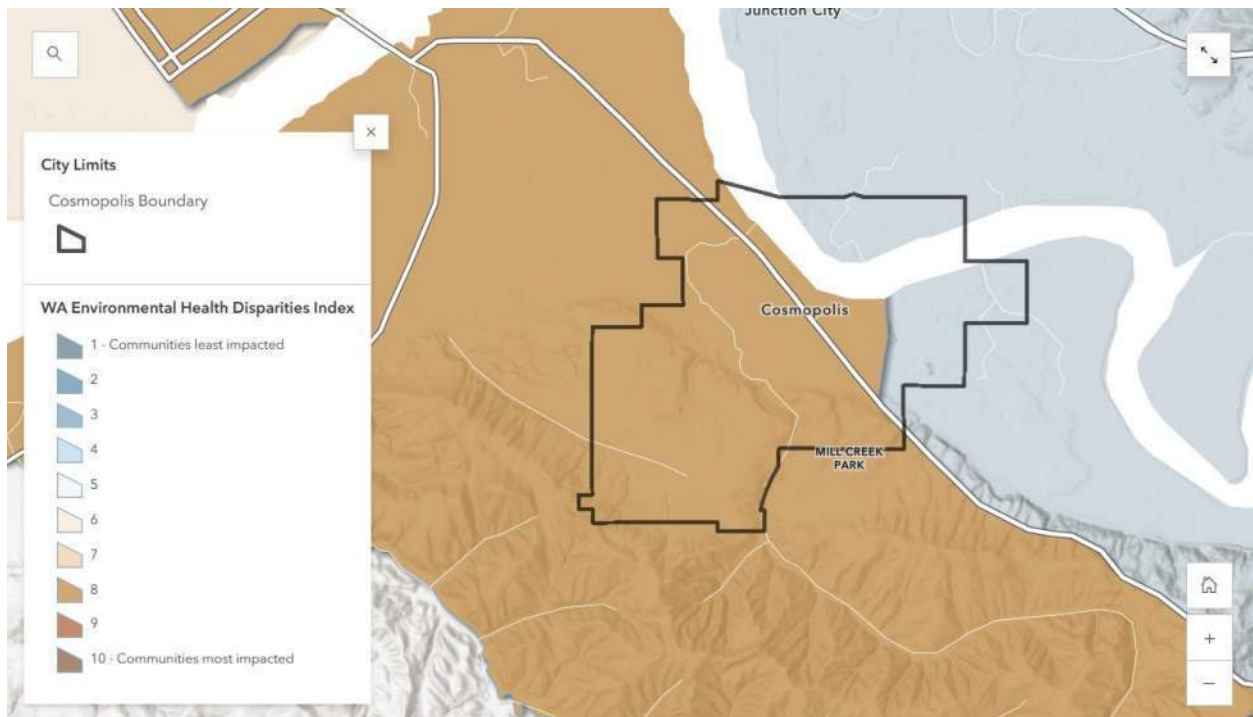
### 3. Environmental Health

**Data Source:** [2022 WA Department of Health: Environmental Health Disparities Index](#)

Identifying populations disproportionately affected by environmental health impacts is important to message helpful information to them. The Washington Environmental Health Disparities Index helps identify areas experiencing disproportionately high cumulative environmental health impacts.

Risk is calculated by the formula: Risk = Threat x Vulnerability. This measures the cumulative effect of environmental exposures (threat) and socioeconomic or health factors (vulnerability).

Index values range from 1 (least impacted) to 10 (most impacted). The higher the index value, the more exposure areas have to toxins harmful to human health.



**Figure A-4. City of Cosmopolis 2023 (5-year) ACS environmental health disparities index**

#### 4. Language Ability

**Data Source:** [2023 \(5-yr\) ACS English Ability and Linguistic Isolation](#)

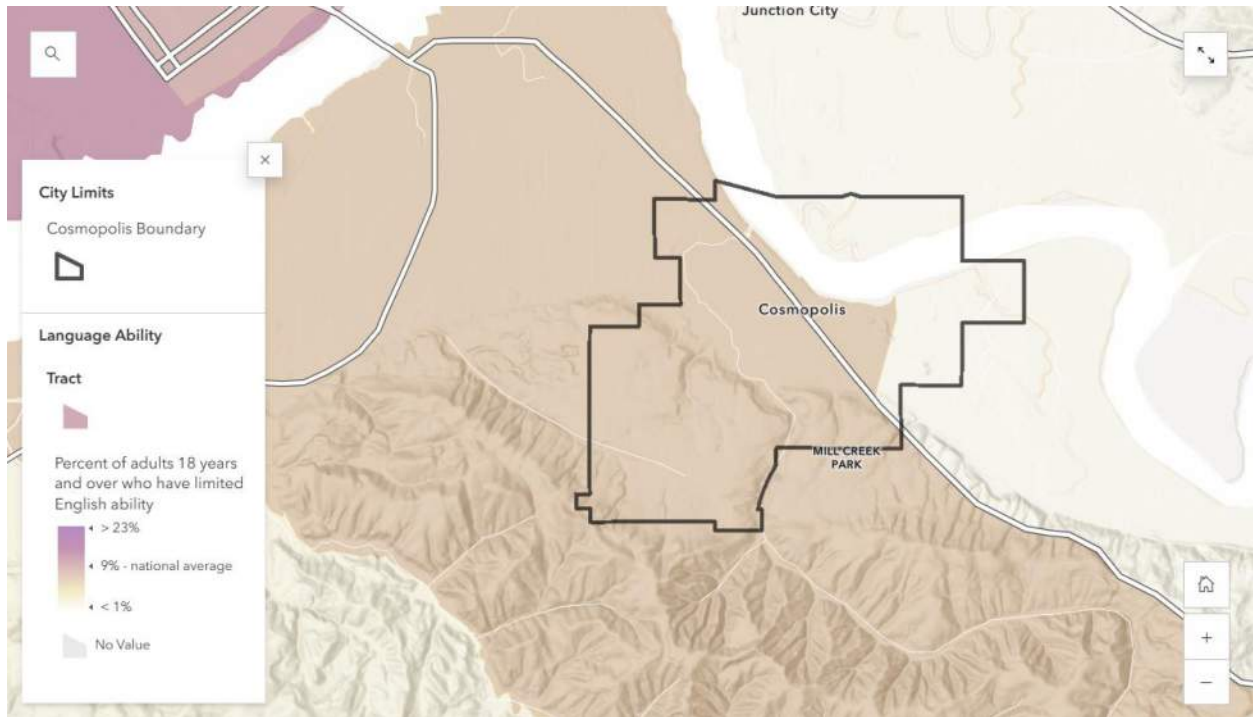
Identifying areas of linguistic isolation and the predominant language spoken at home is essential for projects that rely on public input and participation. Beyond providing information in all necessary languages, identifying communal spaces where information can be shared – such as places of worship and cultural centers – will help strengthen two-way communication.

Cosmopolis is largely an English-speaking community, but there are several populations that speak Spanish or Asian Pacific languages which should be considered when planning community engagement.

In the City, there are only an estimated 17 people (less than 1% of the population age 5+) who speak Spanish and English less than “very well”. Of the 17 people with limited English proficiency, only 9 people speak Spanish and no English (none are age 65+).

The largest English-limited proficiency population speaks Asian Pacific languages and English less than “very well”, with an estimated 51 people (2% of the population age 5+). Of those 51 people, 41 speak an Asian Pacific language and no English (28 are age 65+).

Tract 9 has the highest percentage of Spanish speakers at home, with 11% of its population (age 5 and older) – a total of 659 people – speaking Spanish at home.



**Figure A-5. City of Cosmopolis 2023 (5-year) ACS English ability and linguistic isolation**

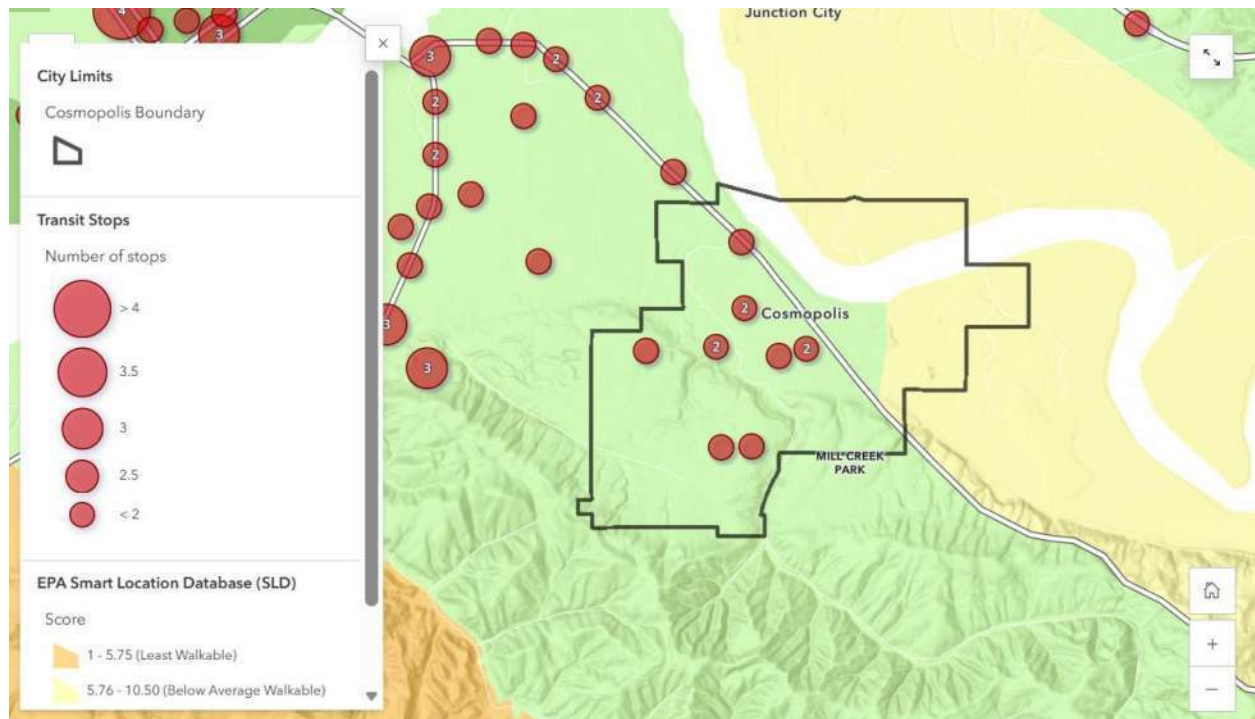
## 5. Mobility

**Data Source:** [2019 EPA Smart Location Database](#)

Mobility (access to public or private transportation options) is a potential barrier to participation in public engagement.

Within Cosmopolis, 9% of renter households do not have a vehicle, while less than 1% of owner households do not have a vehicle.

Fortunately, Cosmopolis receives an above average score from the EPA National Walkability Index. Additionally, transit stops are less than ¼ mile from any location within the city.



**Figure A-6. City of Cosmopolis 2023 (5-year) ACS transit status and EPA smart location database**

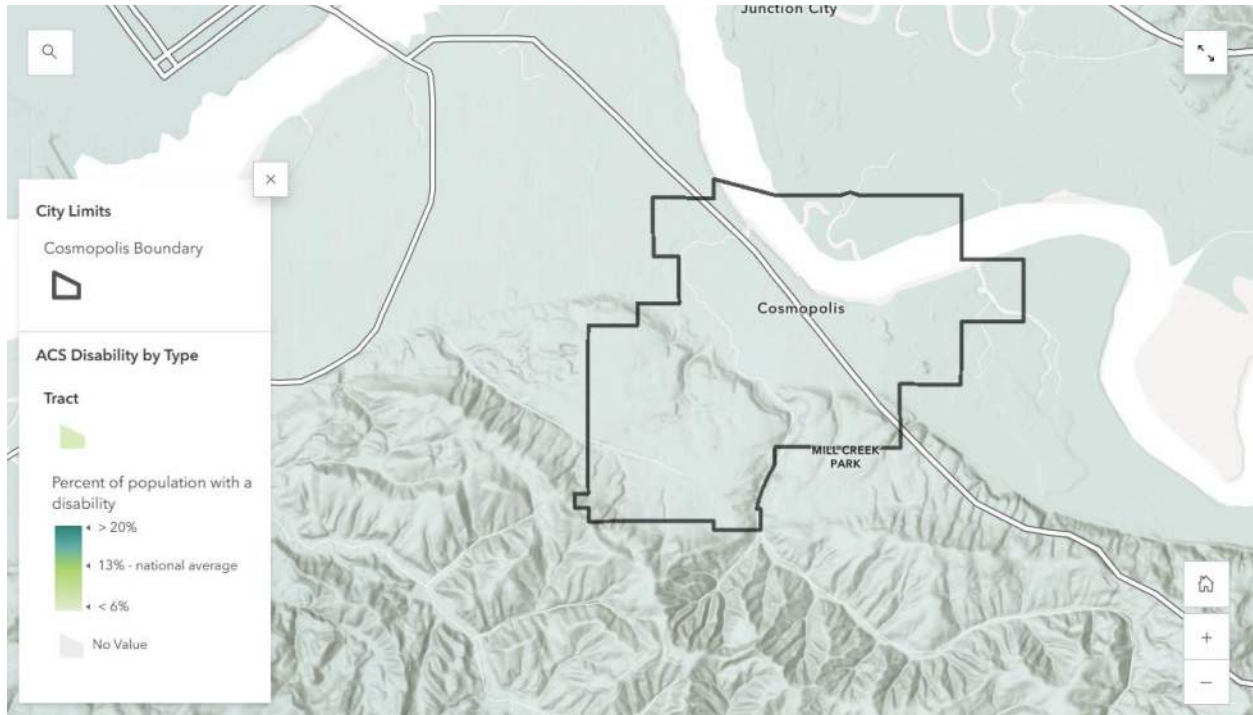
#### *5A Disability*

**Data Source:** [2023 \(5-yr\) ACS Disabilities by Type](#)

Recognizing a community's unique health needs and abilities allows agencies to anticipate and prioritize public concerns and engagement challenges. Exploring the map to the left allows users to review the range of disabilities in Cosmopolis.

Thirty percent of households have at least one person with a disability, which is 75% higher than the state of Washington average.

Tract 9 has the highest percentage of individuals with a disability (17%). An estimated 377 individuals have two or more types of disabilities, with ambulatory difficulties being the most prominent.



**Figure A-7. City of Cosmopolis 2023 (5-year) ACS disability status by type**

## 6. Tribal

**Data Sources:** [2023 \(5-yr\) ACS Race and Hispanic Origin](#); [Native Land Digital](#)

Special care should be taken to outreach to tribal communities. Approximately 470 Native Americans<sup>1</sup> reside in Cosmopolis, or about 5% of the total population. Cosmopolis occupies the ancestral lands of the Chehalis and Quinault tribes. Residents of the Federally recognized Quinault Native Reservation to the north may also obtain services in Cosmopolis. However, no Bureau of Indian Affairs boundaries and land area representations were present in the city limits.

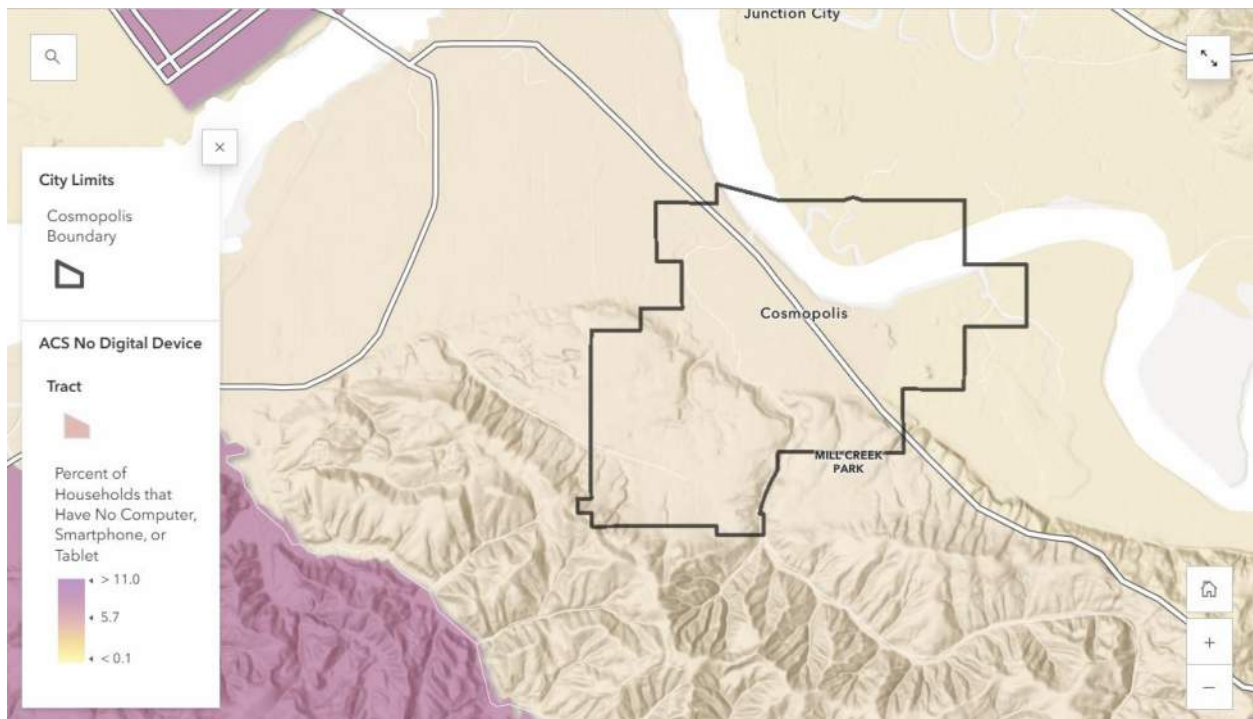
## 7. Digital Usage

**Data Source:** [2023 \(5-yr\) ACS Internet Connectivity Variables](#)

Across Cosmopolis, 9% of households do not have internet access, which is 77% higher than average for the state of Washington. Among residents aged 65 and older, 1% do not have access to a computer, which is consistent with the Washington state average.

Since internet service is widely available in Cosmopolis, lack of connectivity is more likely related to economic or educational factors.

<sup>1</sup> U.S. Census classifies tribal populations as “American Indian or Alaska Native alone”.



**Figure A-8. City of Cosmopolis 2023 (5-year) ACS digital usage status**

## 8. Community Facilities

**Data Sources:** Esri, Grays Harbor County Parcels, Public Libraries Survey, National Center for Educational Statistics.

There are numerous local facilities that can serve as a conduit to communities identified as overburdened. These primary categories include:

- Schools
- Libraries
- Places of Worship
- Senior Centers
- Medical Facilities
- Transportation Services
- Nonprofit, charitable, and workforce development organizations

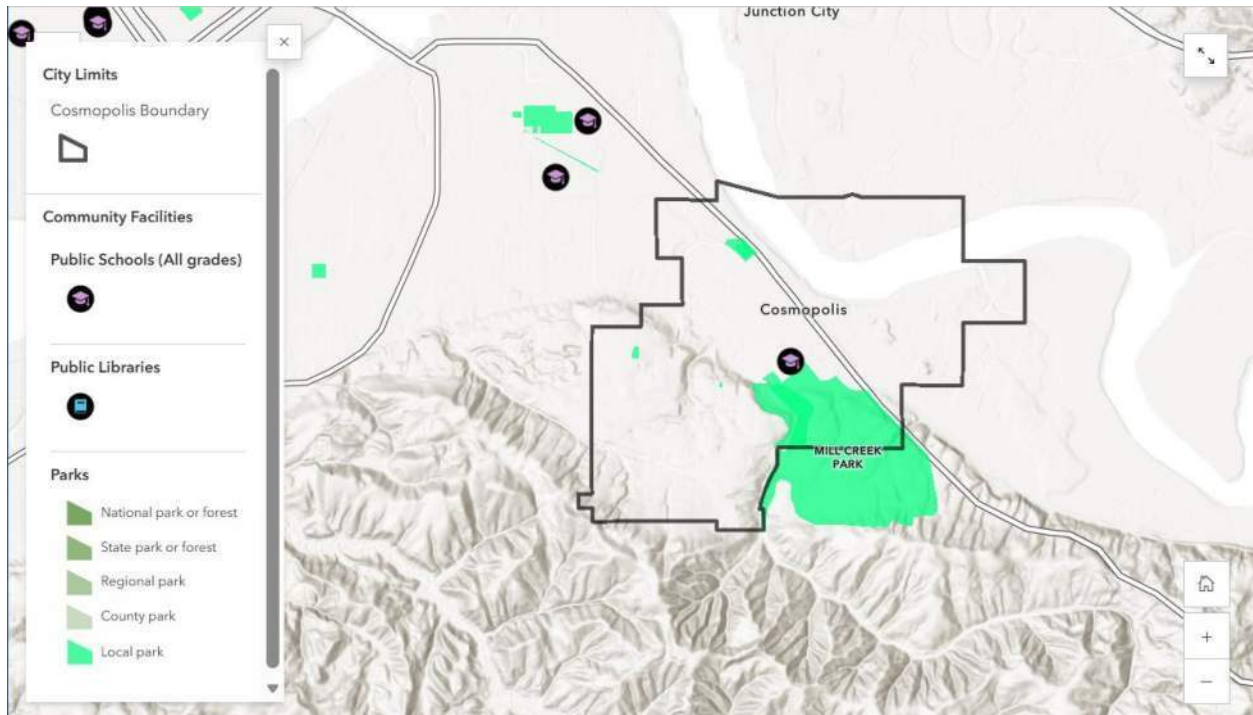


Figure A-9. City of Cosmopolis community facilities

## A.4 Community Explorer Application

A Community Explorer was also developed to support the research of additional data sources related to the eight themes of study. A Community Explorer is an ArcGIS Online web map application designed to allow all team members view access to community-related geospatial data in one place. With the ability to toggle on/off or view multiple map layers at one time, this scalable tool allows engagement planners to more efficiently and effectively conduct research, discover patterns, plan, and collaborate with the team.

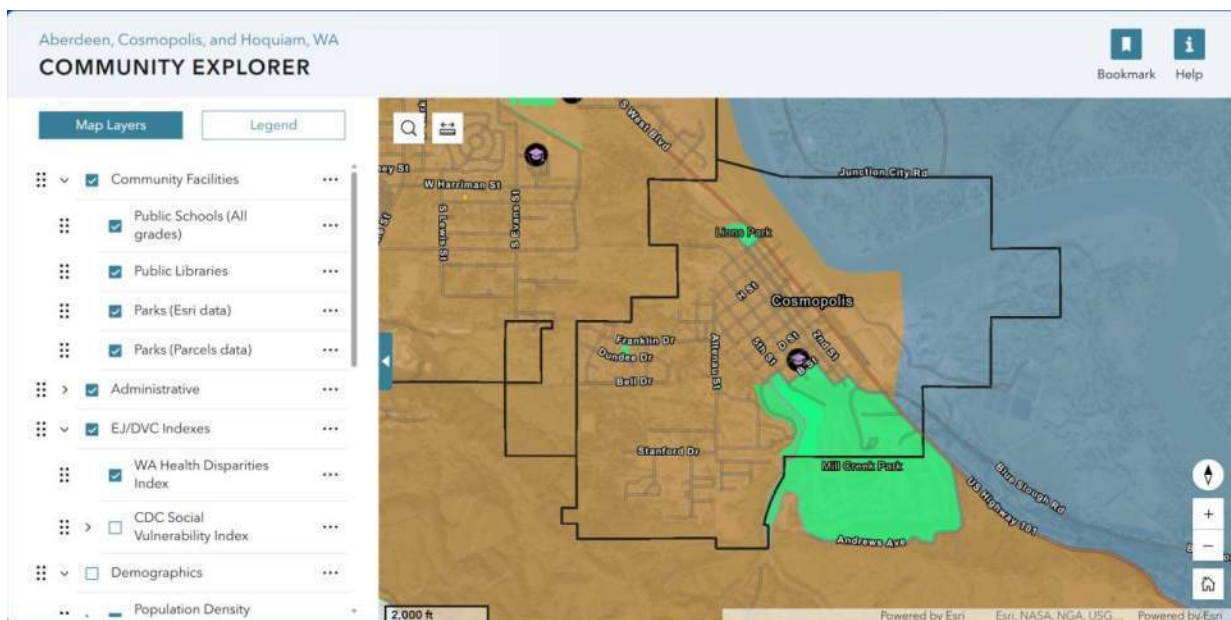


Figure A-10. An example view of the Community Explorer application

## A.5 Engagement Planning Recommendations

The following section outlines a range of suggested engagement tactics. These ideas are listed in the table below with an "X" marking strategies that could support specific overburdened populations.

Table A-1 details implementation ideas, organized by theme.

**Table A-1 Cosmopolis engagement planning recommendations**

| Engagement Tactic                                                  | Implementation                                                                                  | Economics | Seniors | Health | Language | Mobility | Digital Usage | Community Facilities |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------|---------|--------|----------|----------|---------------|----------------------|
| Direct mail outreach                                               | Mail pre-addressed and stamped surveys; citywide postcard distribution; doorhanger bags         | X         |         | X      | X        | X        | X             | X                    |
| Community-based distribution                                       | Provide information or meetings at local churches, the library, and through the school district | X         |         |        |          |          | X             | X                    |
| Pop-up/informational booths                                        | Booths at school sporting events, farmer's market                                               | X         |         |        |          |          | X             | X                    |
| Partnerships with institutions (e.g., hospitals, clinics, schools) | Flyers at churches; booths at school events; coordination with Grays Harbor Transit             | X         |         |        | X        | X        | X             | X                    |
| Multilingual and accessible materials                              | Translated materials                                                                            |           |         | X      |          |          | X             |                      |
| Digital access alternatives                                        | Printed surveys, newspaper notices                                                              | X         | X       |        |          |          | X             | X                    |
| Incentive-based participation                                      | Grocery coupons and transit passes for participation; childcare at public meetings              | X         | X       |        |          |          | X             |                      |

## A.5.1 Implementation Ideas

### 1. Economics

- a. To ensure outreach to low-income households, mail pre-addressed and stamped project surveys directly to residents for easy completion.
- b. Partner with property managers at low-income residential buildings/units to share information through relevant channels, such as email newsletters, lobby postings, and printed flyers.

### 2. Seniors

- a. Due to the lack of facilities for senior residents in Cosmopolis, and the likelihood of residents traveling to nearby cities for services, mail materials (including project information or pre-addressed and stamped project surveys) directly to all households. Consider using large fonts, clear instructions and ensure all collateral is 508 compliant.

### 3. Health

- a. Due to the lack of facilities for residents with disabilities or health needs in Cosmopolis, and the likelihood of residents traveling to nearby cities for services, mail materials (including project information or pre-addressed and stamped project surveys) directly to this population.

### 4. Language

- a. Post English and translated (recommend at minimum, Spanish and several Asian Pacific languages) flyers in Grays Harbor Transit bus shelters.

### 5. Mobility

- a. Partner with Grays Harbor Transit to launch a small outreach campaign that includes placing posters in bus shelters and running advertisements on key bus routes, like Route 30 (Cosmopolis). Complement the transit outreach with coordinated posts on social media.
- b. Offer transit passes for individuals who participate in any outreach activities (e.g., completing a survey, leaving a comment, participating in a public meeting).
- c. Place yard signs with QR code/website information along 1st Street.

### 6. Tribal

- a. Partner with a Tribal Liaison to coordinate engagement with local Tribes.

### 7. Digital Usage

- a. For households without internet access, prioritize printed materials such as pre-addressed and stamped project surveys mailed directly to residents.
- b. Consider Citywide postcard distribution or placing informational materials in doorhanger bags to reach individuals directly where they live.



- c. Share public meeting notices, survey details, and/or project information in The Daily World, the county's local newspaper, to ensure readers receive timely and accessible information.

## 8. Community Facilities

- a. Partner with Grays Harbor Transit to launch a small outreach campaign that includes placing posters in bus shelters and running advertisements on key bus routes like Route 30 (Cosmopolis). Complement the transit outreach with coordinated posts on social media.
- b. Offer transit passes for individuals who participate in any outreach activities (e.g., completing a survey, leaving a comment, participating in a public meeting).
- c. Place yard signs with QR code/website information along 1st Street.
- d. Provide informational materials to local churches and request an announcement or distribution during service.

## A.6 Chapter Takeaways

Active community engagement is vital for a successful stormwater program. The City conducted an overburdened community assessment to understand how best to reach its constituents, carefully considering eight potential barriers to participation, including: economics, seniors, health, language, mobility, tribal, digital use, and community facilities.

The following are key takeaways from this effort:

- Flooding persists as the primary stormwater concern for the community.
- Community outreach efforts can help inform constituents about flooding concerns and generate dialogue about actions the community can take, including planning emergency preparations and seeking external funding opportunities for flooding mitigation projects.
- Community engagement planning ideas were identified for each of the eight potential barriers which the City will leverage to support this work.

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## Appendix B. Mill Creek MOIP TM

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# **Draft** Mill Creek Multi-Objective Improvements Plan

Culvert Crossings Alternative Evaluation

*City of Cosmopolis, Washington*

April 1, 2026



## Contents

|       |                                                               |    |
|-------|---------------------------------------------------------------|----|
| 1     | Introduction .....                                            | 1  |
| 1.1   | Background .....                                              | 1  |
| 1.2   | Objective and Authorization .....                             | 3  |
| 2     | Existing Conditions .....                                     | 4  |
| 2.1   | Land Cover, Topography, and Drainage.....                     | 4  |
| 2.1.1 | Existing Culvert Crossings .....                              | 5  |
| 2.1.2 | Site Reconnaissance and Photos .....                          | 6  |
| 2.1.3 | Soil and Groundwater.....                                     | 6  |
| 2.1.4 | Drainage Basin.....                                           | 7  |
| 2.2   | Federal Emergency Management Agency .....                     | 9  |
| 2.3   | Environmental and Critical Areas.....                         | 9  |
| 2.4   | Cultural Resources.....                                       | 10 |
| 3     | Alternatives Options .....                                    | 10 |
| 3.1   | Alternative A: Culvert Replacement .....                      | 10 |
| 3.2   | Alternative B: Culvert Replacement with High-Flow Bypass..... | 13 |
| 4     | Modeling Methodology .....                                    | 17 |
| 4.1   | Hydraulic Modeling and Assumptions .....                      | 17 |
| 4.1.1 | Tide Gates Sensitivity Hydraulic Model Analysis .....         | 18 |
| 4.1.2 | Alternative B High-Flow Bypass Model.....                     | 19 |
| 5     | Alternatives Evaluation.....                                  | 19 |
| 5.1   | Benefits and Feasibility Assessment Methodology .....         | 20 |
| 5.2   | Benefit Assessment.....                                       | 20 |
| 5.2.1 | Hydraulic Improvements .....                                  | 20 |
| 5.2.2 | Fish Passage.....                                             | 21 |
| 5.3   | Feasibility Evaluation.....                                   | 22 |
| 5.3.1 | Technical Feasibility .....                                   | 22 |
| 5.3.2 | Construction Implementation Challenges .....                  | 22 |
| 5.3.3 | Environmental and Permitting .....                            | 23 |
| 5.3.4 | Community Impacts.....                                        | 23 |
| 5.3.5 | Operations and Maintenance .....                              | 23 |
| 5.3.6 | Opinion of Probable Construction Cost.....                    | 23 |
| 5.4   | Alternative Evaluation Scoring .....                          | 24 |
| 6     | Summary and Recommendations .....                             | 24 |
| 6.1   | Recommended Alternative .....                                 | 25 |
| 6.1.1 | Tide Gate Study Recommendation .....                          | 25 |
| 6.1.2 | Alternative A Culvert Replacement Prioritization .....        | 25 |
| 7     | References .....                                              | 26 |

## Tables

|            |                                                                      |    |
|------------|----------------------------------------------------------------------|----|
| Table 2-1. | Existing culvert crossing summary .....                              | 5  |
| Table 2-2. | FEMA FIS Mill Creek annual chance event peak discharge summary ..... | 9  |
| Table 3-1. | Alternative A proposed improvements.....                             | 11 |
| Table 3-2. | Alternative B proposed improvements.....                             | 13 |
| Table 5-1. | Water surface elevation at culvert crossings summary .....           | 21 |

|                                                                        |    |
|------------------------------------------------------------------------|----|
| Table 5-2. Culvert flow velocity for the 20-year storm (115 cfs) ..... | 21 |
| Table 5-3. OPCC summary (2026 dollars).....                            | 24 |
| Table 5-4. Alternative Evaluation Matrix Criteria and Score .....      | 24 |

## Figures

|                                                                 |    |
|-----------------------------------------------------------------|----|
| Figure 1-1. Mill Creek MOIP culvert crossing location map ..... | 2  |
| Figure 2-1. NRCS soil survey map.....                           | 7  |
| Figure 2-2. Mill Creek drainage basin overview map .....        | 8  |
| Figure 3-1. Alternative A.....                                  | 12 |
| Figure 3-2. Alternative B.....                                  | 15 |
| Figure 3-3. Lateral Weir Concept.....                           | 16 |
| Figure 5-1. Alternatives evaluation criteria.....               | 20 |

## Abbreviations

|                  |                                                                                |
|------------------|--------------------------------------------------------------------------------|
| 1D               | one-dimensional                                                                |
| AACE             | Association for the Advancement of Cost Engineering                            |
| ADS              | Advanced Drainage Systems, Inc.                                                |
| BE               | biological evaluation                                                          |
| Berglund Schmidt | Berglund Schmidt & Associates, Inc.                                            |
| CFR              | Code of Federal Regulations                                                    |
| cfs              | cubic foot/feet per second                                                     |
| City             | City of Cosmopolis                                                             |
| CMP              | corrugated metal pipe                                                          |
| DAHP             | [Washington State] Department of Archaeology and Historic Preservation         |
| FEMA             | Federal Emergency Management Agency                                            |
| FIS              | Flood Insurance Study                                                          |
| fps              | foot/feet per second                                                           |
| ft               | foot/feet                                                                      |
| GIS              | geographic information system                                                  |
| HDR              | HDR Engineering, Inc.                                                          |
| HEC-RAS          | Hydrological Engineering Center River Analysis System                          |
| LIDAR            | light detection and ranging                                                    |
| MOIP             | Multi-Objective Improvement Plan                                               |
| N/A              | not applicable                                                                 |
| NAVD88           | North American Vertical Datum of 1988                                          |
| NGVD             | National Geodetic Vertical Datum                                               |
| NMFS             | National Marine Fisheries Service                                              |
| O&M              | operations and maintenance                                                     |
| OPCC             | opinion of probable construction cost                                          |
| RCB              | rectangular concrete box                                                       |
| ROW              | right-of-way                                                                   |
| SEPA             | State Environmental Policy Act                                                 |
| TM               | technical memorandum                                                           |
| USACE            | United States Army Corps of Engineers                                          |
| USC              | United States Code                                                             |
| USFWS            | United States Fish and Wildlife Service                                        |
| USGS             | United States Geological Survey                                                |
| WDFW             | Washington Department of Fish and Wildlife                                     |
| WISAARD          | Washington Information System for Architectural and Archeological Records Data |
| WRIA             | Water Resource Inventory Area                                                  |

WSE                      water surface elevation

## Appendices

- Appendix A. Photos
- Appendix B. NRCS Report
- Appendix C. Hydraulic Modeling
- Appendix D. Cost Estimates and Risk Assessment
- Appendix E. Matrix Evaluation Criteria
- Appendix F. References

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# 1 Introduction

The purpose of this technical memorandum (TM) is to evaluate culvert crossing improvements and/or a high-flow bypass for localized flood reduction along a stretch of Mill Creek, located between C and Altenau streets in the City of Cosmopolis. Mill Creek is a perennial stream that outlets to the Chehalis River. Documented coho salmon spawning occurs in the creek downstream of Mill Creek Pond. It is recommended that fish passage characteristics at the culvert crossings should be maintained or improved. A location map depicting the evaluation limits and Mill Creek landmarks is provided as Figure 1-1. The feasibility and alternatives evaluation are part of the City of Cosmopolis's (City's) Mill Creek Multi-Objective Improvement Plan (MOIP).

## 1.1 Background

The City developed the Mill Creek MOIP following a dam breach in November 2008. The goal of the Mill Creek MOIP is to assess the Mill Creek system between the existing Mill Creek Pond and the three tide gates where Mill Creek outlets to the Chehalis River.

The original Mill Creek MOIP evaluation, which was completed in 2013, is outlined in the *Mill Creek Dam Improvements Project* TM, hereafter referred to as the Mill Creek Dam TM. The Mill Creek MOIP goals are detailed within the City of Cosmopolis *Multi-Objective Plan for Mill Creek* Memorandum from 2014. A copy of these documents are provided in Appendix F.

Key components of the Mill Creek Multi-Objective Improvement Plan include the following:

- **Repair or replace Mill Creek Dam and Mill Creek Pond:** The dam replacement, pond repair, gravel walking trail and footbridges near the pond, and construction of a fish ladder leading to the pond were all constructed and declared complete in 2018. Mill Creek Dam and pond are not a part of this evaluation.
- **Evaluate function for the tide gates on Mill Creek, located upstream of the confluence with the Chehalis River:** An assessment of tide gate operations may improve Mill Creek stream and localized flooding (because of backwater effects) and may also improve conditions at the fisheries. Recommendations for completion of a tide gate study will be included with the Cosmopolis Stormwater Comprehensive Plan and are not a part of this evaluation.
- **Address intermittent localized flooding downstream of Mill Creek Dam along F, G, H, and Altenau streets:** The culvert at C Street experienced issues during the 2008 dam breach event and contributed to flooding in Mill Creek Park and the footbridge area. This is included with this evaluation.

The focus of this TM is to evaluate the Mill Creek culvert crossings between Altenau and C streets and determine if culvert improvements and/or construction of a high-flow bypass are feasible and beneficial for flood reduction.



## 1.2 Objective and Authorization

The purpose of the Mill Creek Culvert Crossing Evaluation (hereafter called the Mill Creek Crossing Study) is to meet the 2008 Mill Creek MOIP goal to evaluate localized flood reduction benefits through culvert crossing replacements along a 0.7-mile-long section of Mill Creek, located within the city limits.

The Mill Creek Crossing Study includes evaluation of two alternatives. The first, Alternative A, evaluates culvert replacements at C, E, F, G, H, and Altenau streets coupled with localized channel improvements directly upstream and downstream of the crossings. The second, Alternative B, evaluates culvert replacements at C, F, and Altenau streets coupled with a high-flow bypass that diverts 98 cubic feet per second (cfs) from Mill Creek's main channel during the 100-year flood event. Alternatives evaluation criteria include feasibility and performance for flood reduction during flood events and fish passage improvements at the crossings. The Mill Creek Crossing Study scope includes the following activities:

1. Review available information, including the Mill Creek Dam and Mill Creek MOIP reports.
2. Survey the existing culvert crossings between C and Altenau streets to supplement available survey data obtained from the Mill Creek Dam replacement project. Berglund Schmidt & Associates, Inc. (Berglund Schmidt) completed survey work in May 2023 by as part of prior Mill Creek MOIP work.
3. Conduct a field review at the culvert crossings and accessible sections of the potential high-flow bypass alignment. HDR Engineering, Inc. (HDR) staff completed a field review on November 11, 2022. A copy of the photos is provided in Appendix A.
4. Conduct screening and development of potential alignment for the high-flow bypass, Alternative B.
5. Perform hydrologic and hydraulic modeling of Mill Creek between Mill Creek Dam to downstream of the Altenau Street crossing:
  - a. Review hydrologic and hydraulic modeling completed with the Mill Creek Dam replacement project and adopted Mill Creek MOIP planning documents
  - b. Update the existing-condition Mill Creek and culvert crossing hydraulic model from the Mill Creek Dam project based on survey data provided by Berglund Schmidt
    - i. Develop a hydraulic model of existing conditions to establish a hydraulic baseline for comparison against the two alternatives
    - ii. Complete a sensitivity analysis using the hydraulic model to evaluate potential backwater effects to the existing culvert crossings from the Mill Creek tide gates
  - c. Develop proposed-condition hydraulic models for each proposed alternative.
6. Develop a qualitative evaluation matrix to score and rank the two alternatives. The evaluation matrix includes flood reduction, fish passage, and technical and cost criteria.
7. Develop improvement plan recommendations with prioritization for the selected alternative.

8. Prepare planning-level opinions of probable construction cost (OPCCs).

## 2 Existing Conditions

This section provides a brief overview of Mill Creek existing conditions and highlights conditions within the report study limits.

### 2.1 Land Cover, Topography, and Drainage

Mill Creek is a perennial stream that originates in the hillsides southeast of Mill Creek Pond and is fed by both runoff and groundwater seepage. The Mill Creek tributary basin is approximately 1,280 acres and contains a mix of residential development, recreational area, and undeveloped second-growth forest. Mill Creek Dam is located directly upstream of the C Street roadway; the dam does not provide adequate active storage to attenuate Mill Creek peak flow rates. Refer to Figure 1-1 above for the Mill Creek alignment through the city of Cosmopolis and to Figure 2-2 for an overview of the Mill Creek tributary basins.

Topography along the project limits is generally flat. Mill Creek invert elevation ranges from 16.5 to 10.0 feet between C and Altenau streets. Channel slopes along this section of Mill Creek average 0.4 percent. Drainage along the tributary subbasins generally flows to the northwest and either surface-flows into the creek or is collected within different localized storm sewer systems that directly outlet into the creek. This reach of Mill Creek is approximately 2,300 feet long and meanders through a developed residential area. The stream is channelized and artificially armored with riprap- and/or concrete-lined embankments in sections with little to no overhead cover. The Mill Creek MOIP report (Cosmopolis 2014) defined this reach of Mill Creek as a migratory corridor for coho salmon between the Chehalis River and Mill Creek Dam. See Section 2.3 for further discussion on fish passage and environmental considerations.

Mill Creek passes through six culvert crossings. The average open-channel depth in this reach is between 6.5 and 7.8 feet. All six roadway crossings are multiple circular culvert installations. Photos of the existing culvert crossings with bank conditions are provided in Appendix A, and Table 2-1 lists the existing culvert characteristics.

Downstream from the Altenau Street culvert crossing, located past I Street, Mill Creek banks to the east and enters a shallow estuary that is tidally influenced from the Chehalis River. The tide gates are normally open and close during high-tide or storm events. Water pressure causes the tide gates to close and block fish passage from the Chehalis River to Mill Creek during these periods. The Mill Creek Operations and Maintenance Manual (Cosmopolis 1998) notes that the tide gate floats are set at elevation 8.0 feet National Geodetic Vertical Datum (NGVD) from March through October and at 4.5 feet NGVD from November through February. When the water level reaches the float the tide gates close.

See Section 2.2 for peak flow events and 100-year water surface elevation (WSE).

## 2.1.1 Existing Culvert Crossings

There are six culvert crossings within the evaluation area. Table 2-1 below provides a summary of the existing Mill Creek culverts.

**Table 2-1. Existing culvert crossing summary**

| Street  | Culvert size, type, and length                                                                         | Observed flow depth (in) <sup>a</sup> | Observed flow depth (in) <sup>b</sup> | Sediment in culvert | Fish barrier status | Stream conditions                                                                                                                                                    |
|---------|--------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|---------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C       | Two 48-inch-diameter CMP with concrete headwall and wingwall, each 45 ft long                          | 4                                     | 14                                    | No                  | Yes                 | Upstream and downstream banks are earthen and vegetated. Culvert was identified by the Mill Creek Dam TM as a potential velocity barrier for smaller or weaker fish. |
| E       | Two 60-inch-diameter lined CMP with concrete headwall and wingwall, each 67 ft long                    | 6                                     | 15                                    | No                  | Yes                 | Downstream: Sheet pile on downstream right bank (50 ft); rock wall on left bank.                                                                                     |
| F       | Three 48-inch-diameter CMP with concrete headwall and wingwall, each 122 ft long                       | 6–9                                   | 16                                    | No                  | No                  | Downstream: Sheet pile on downstream right bank (50 ft). Survey noted that three of the pipes may be curved or have a bend.                                          |
|         | One 18-inch-diameter ADS pipe (high flow only), 118 ft long.                                           | None                                  | None                                  | No                  | No                  | Pipe invert set at ±3 ft above the other three culverts within the same headwall. This culvert operates in high-flow conditions.                                     |
| G       | One 60-inch-diameter CMP with concrete headwall, culverts protruding on upstream side only, 96 ft long | 6                                     | 8                                     | Yes                 | Yes                 | Downstream: 4 ft rock wall with concrete chunks and sheet pile upstream; rock wall and poured concrete downstream.                                                   |
| H       | One 60-inch-diameter CMP with concrete headwall and wingwall, 81 ft long                               | 12                                    | 22                                    | Yes                 | No                  | Upstream: 100% hydromodified between H and G streets.                                                                                                                |
| Altenau | One 60-inch CMP that protrudes from a concrete headwall, 95 ft long                                    | 6–9                                   | 17                                    | Yes                 | No                  | Downstream: Right bank is 100% hydromodified; left bank appears to be natural. Survey noted that a storm line tees directly into one of the culverts.                |

<sup>a</sup> Reported conditions from Mill Creek Park Dam Trip Report, 12/21/2011.

<sup>b</sup> Reported conditions at culvert crossings from Berglund Schmidt survey, 5/30/2023.

ADS = Advanced Drainage Systems, Inc.; CMP = corrugated metal pipe; ft = feet.

## 2.1.2 Site Reconnaissance and Photos

HDR conducted a site review on November 11, 2022, to obtain photos of the existing Mill Creek culvert crossings, Alternative B bypass alignment, and existing Mill Creek tide gates. Select photos from the site review are included in Appendix A. The majority of Mill Creek between C and Altenau streets is located on private residential property and access was available only from the road right-of-way (ROW) at the culvert crossings.

The site reconnaissance included review of the Alternative B high-flow bypass facility alignment. A section of the high-flow bypass alignment was accessed at the southwest end of E Street. Some sections of the high-flow bypass facility alignment were not accessible during the field reconnaissance. Information for areas that were inaccessible was sourced from geographic information system (GIS) data from Grays Harbor County online.

The city of Cosmopolis experienced a flooding event on January 6, 2022, with localized flooding that exceeded bank capacity in Mill Creek Park and C, E, F, H, and Altenau streets. Photos of the flooding event are provided in Appendix A. The Mill Creek Dam TM (HDR 2013) reported occasional localized downstream flooding along G, H, and I street crossings.

## 2.1.3 Soil and Groundwater

Soils information for Mill Creek within the analysis area was obtained from the Natural Resources Conservation Service's online Web Soil Survey (NRCS 2011). Soils within the Mill Creek culvert crossing area are primarily Mopang Silty Loam, which is described as well or moderately well drained soils that formed in glaciofluvial sediments. Refer to Figure 2-1 for the Mill Creek soils map. A copy of the area soils map and excerpts from the NRCS soils report are provided in Appendix B.

While soils within the area have the potential to be well drained because of their proximity to Mill Creek, the estimates prepared for this TM assume that soils will be saturated and unsuitable for reuse. A specific project geotechnical investigation is recommended early in the design process for the selected alternative.

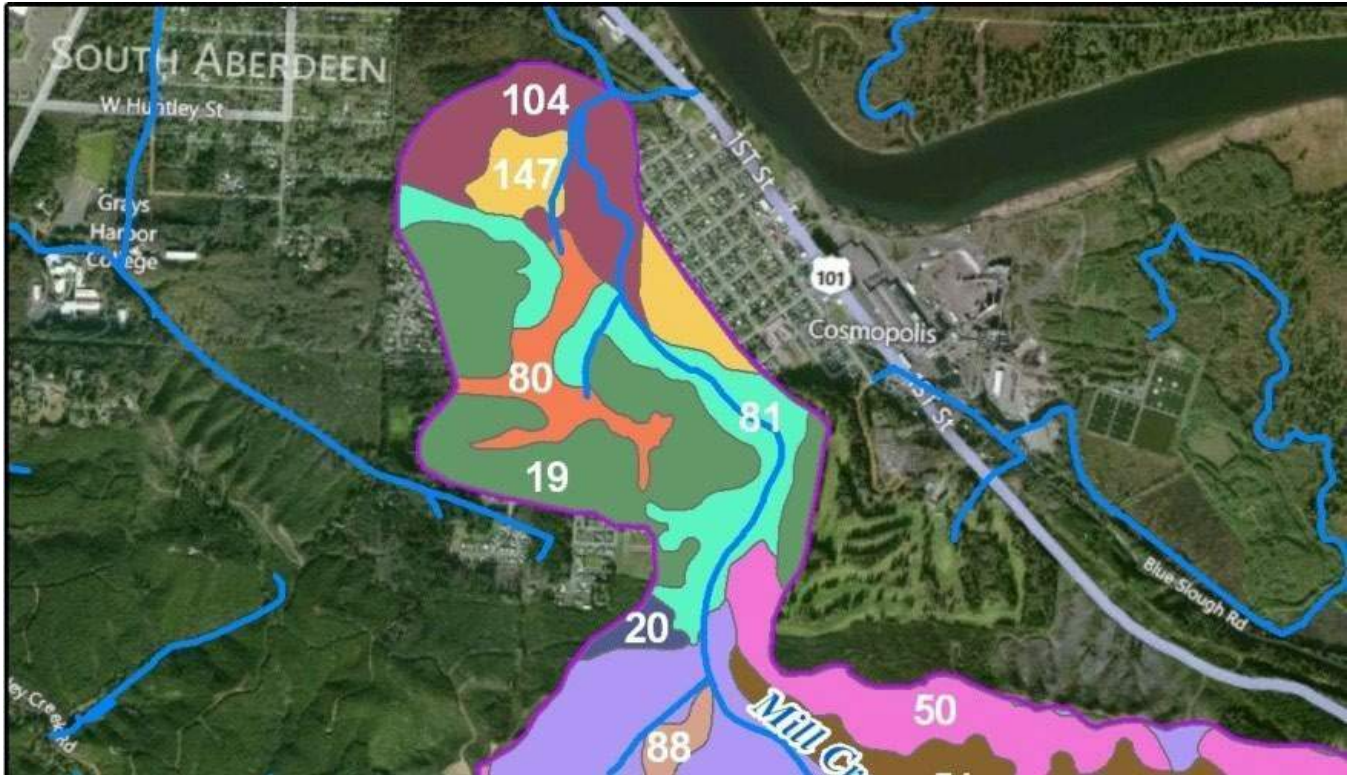


Figure 2-1. NRCS soil survey map

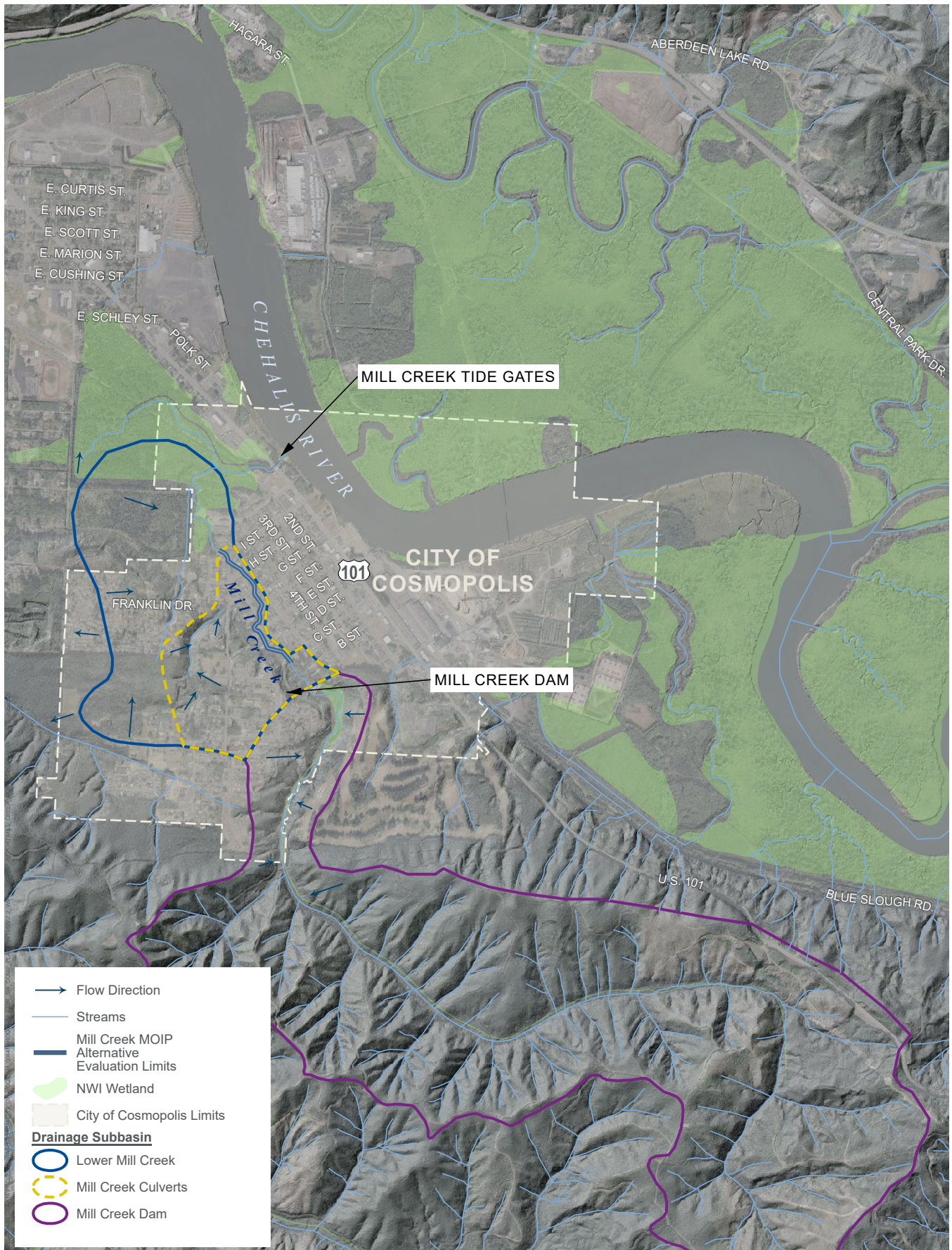
The Mill Creek Dam construction documents describe flows within the creek as variable and uncontrolled with no flow gages on Mill Creek. The construction documents included an estimated in-water flow exceedance for the fish ladder window. A copy of Mill Creek Dam construction documents with the in-water flow exceedance charts is provided in Appendix F. It is recommended that stream flow monitoring be considered as part of study of the tide gate or as part of the selected alternative preliminary design.

#### 2.1.4 Drainage Basin

The Mill Creek drainage basin adopted by the United States Geological Survey (USGS) and referenced from Mill Creek Dam design is provided in Appendix F. The drainage basin contains the following two tributary subbasins:

- The first subbasin originates in the foothills and watershed area that drains to the Mill Creek Dam, spillway, and fish ladder area.
- A second subbasin is located between Mill Creek Dam to the Mill Creek estuary, downstream of Altenau Street.

Figure 2-2 depicts the Mill Creek drainage area that is referenced from the Mill Creek Dam TM and the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Grays Harbor County and Incorporated Areas (FEMA 2020). Mill Creek drainage tributary area and flows are detailed in Section 2.2.



0 2,000 Feet

## MILL CREEK DRAINAGE BASIN OVERVIEW MAP

Figure 2-2

## 2.2 Federal Emergency Management Agency

On February 23, 2017, FEMA issued an updated map that shows the effects of construction of a flood control levee along the Chehalis River in the vicinity of Mill Creek. Any proposed modifications to Mill Creek as part of the project will need to be made in accordance with the FEMA regulations (National Flood Insurance Act of 1968, as amended, United States Code [USC] Title 42 Sections 4001–4128 and Code of Federal Regulations [CFR] Title 44 CFR Part 65) that were established to ensure that base flood elevations do not increase.

A copy of Map 53027C0909D for the community of the City of Cosmopolis (530059) and select sheets from the associated Flood Insurance Study (FIS) for Grays Harbor County and Incorporated Areas (Rev. 9/18/2020), including Mill Creek drainage above Altenau Street, are included in Appendix F. Table 2-2 contains a list of peak discharge flows for various annual chance events.

**Table 2-2. FEMA FIS Mill Creek annual chance event peak discharge summary**

| Location                     | Drainage area in square miles | 10% annual chance event peak discharge (cfs) | 2% annual chance event peak discharge (cfs) | 1% annual chance peak discharge (cfs) | 0.2% annual chance peak discharge (cfs) |
|------------------------------|-------------------------------|----------------------------------------------|---------------------------------------------|---------------------------------------|-----------------------------------------|
| Mill Creek at Altenau Street | 2.00                          | 144                                          | 281                                         | 331                                   | 530                                     |

The flood profile for the 1 percent annual chance flood event (aka 100-year flood event) for the Altenau Street crossing and downstream channel is listed as 11.5 feet in elevation (North American Vertical Datum of 1988 [NAVD88]). Because this WSE is based on the Mill Creek tide gate settings, the FEMA FIS flood profile indicates that the WSE remains at 11.5 feet for both the 2 percent and 10 percent annual chance floods.

## 2.3 Environmental and Critical Areas

This section of Mill Creek is located within Washington Water Resource Inventory Area (WRIA) 22. A biological evaluation (BE) and environmental fisheries habitat assessment study were completed as part of the Mill Creek Park and Dam Improvements project (HDR 2015), hereafter referred to as the Mill Creek Dam BE study. Per the Mill Creek Dam BE study, Mill Creek is a tributary to the Chehalis River and flows through timber-harvested land for approximately 3 miles, through Mill Creek Park, and through the city of Cosmopolis for another mile before discharging to the Chehalis River. Mill Creek was inventoried as a perennial stream with no natural barrier to the Chehalis River and is designated as a Type F stream. A replacement dam was constructed with fish ladder, park, and stream bank improvements in 2018. The Mill Creek Dam project improvements are upstream and outside of the evaluation limits.

Although Mill Creek is not on the 303(d) list of impaired water bodies in Washington, fish health in the creek may be impacted by 6PPD-quinone, a toxic tire derivative, likely entering the creek via roadway runoff. Future consideration for stormwater treatment retrofit of streets near Mill Creek should consider the impact of road runoff on coho salmon and other

salmonids from this pollutant. Such consideration should focus first on higher traffic streets like Highway 101.

There are mapped critical areas on Mill Creek at Mill Creek Pond and in the estuary that is near the Mill Creek confluence with the Chehalis River. Both mapped areas are outside of the culvert crossing evaluation limits.

It should be noted that the Alternative B bypass alignment crosses a natural spring, located at the end of F Street. There may be additional environmental challenges associated with construction in this area.

## 2.4 Cultural Resources

A desktop review was completed using the Washington State Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archeological Records Data (WISAARD), an online GIS-based interactive map, with the following results:

- The archeological risk assessment model indicates that the culvert crossings are within an area designated as a very high risk of archeological resources and a survey is highly advised.
- The project is located within the Confederated Tribes of the Chehalis Reservation area of interest.
- There were no listings for buildings or properties on the historic register along this section of Mill Creek.

It is recommended that a cultural-resources review be completed should the selected alternative proceed to the design phase. Alternative B crosses undeveloped areas with a natural spring where it crosses F Street projected ROW. There may be added risk of encountering cultural resources in this area.

## 3 Alternatives Options

Two alternatives were assessed for potential flood reduction benefits. This section outlines the steps used to identify and evaluate the potential flood reduction benefit for each alternative.

### 3.1 Alternative A: Culvert Replacement

Alternative A proposes the replacement of existing culverts at C, E, F, G, H, and Altenau streets. A list of proposed culvert replacements and improvements is provided in Table 3-1. Existing culvert characteristics are listed in Table 2-1 above. Altenau Street culvert replacement includes replacement of a failing boardwalk structure along its south edge.

**Table 3-1. Alternative A proposed improvements**

| Street  | Proposed culvert size, type, and length                          | Affiliated improvements                                                                                                                                                           | Stream conditions                                                                                                                                                                                                                     |
|---------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 45 ft long  | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank stabilization and stream bed replacement, along with restoration of preexisting fences, landscaping, etc.                                                                  |
| E       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 67 ft long  | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank stabilization and stream bed replacement, along with restoration of preexisting fences, landscaping, etc.                                                                  |
| F       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 118 ft long | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank stabilization and stream bed replacement, along with restoration of pre-existing fences, landscaping, etc.                                                                 |
| G       | 10 ft wide × 5 ft high 3-sided concrete box culvert, 96 ft long  | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank stabilization and stream bed replacement, along with restoration of preexisting fences, landscaping, etc.                                                                  |
| H       | 12 ft wide × 5 ft high 3-sided concrete box culvert, 81 ft long  | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank replacement and stabilization, along with restoration of preexisting fences, landscaping, etc. Reconnection of an existing storm line that tees directly into the culvert. |
| Altenau | 12 ft wide × 5 ft high 3-sided concrete box culvert, 95 ft long  | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 20 ft of upstream and downstream bank replacement and stabilization, along with restoration of preexisting fences, landscaping, etc. Reconnection of an existing storm line that tees directly into the culvert. |

ft = feet.

The culvert replacements include replacement and/or installation of new headwalls and bank stabilization on the upstream and downstream ends of the pipe. Figure 3-1 depicts the culvert replacement locations.



**ALTERNATIVE A**  
Figure 3-1

## 3.2 Alternative B: Culvert Replacement with High-Flow Bypass

Alternative B includes construction of a 30-foot-long lateral weir and diversion structure on the west bank of Mill Creek, downstream of the C Street culvert crossing. This alternative includes the following features:

- C, F, and Altenau streets culvert replacements.
- A high-flow bypass off Mill Creek starting between C and E streets and reconnecting after the Altenau Street culvert. The high-flow bypass conveys diverted Mill Creek flows northwest in undeveloped City ROW to Altenau Street where it is aligned to the south. The conveyance system outlets on the downstream end of the Altenau Street/Mill Creek crossing.
  - An 8-foot-wide, 4-foot-high, rectangular concrete box (RCB) that is approximately 1,700 feet long
  - Maintenance access along the RCB bypass provided every 500 feet or less as maintenance hole chimney type access
  - Fish exclusion at upstream and downstream end of RCB bypass
- A 30-foot lateral weir with fish barrier on the upstream side of the RCB bypass. The weir is placed in a cast-in-place diversion structure and placed approximately 3 feet above the bottom of the channel. The weir crest elevation is set at 17.28 feet to allow 98 cfs to be diverted from Mill Creek.

Alternative B improvements are summarized in Table 3-2 below.

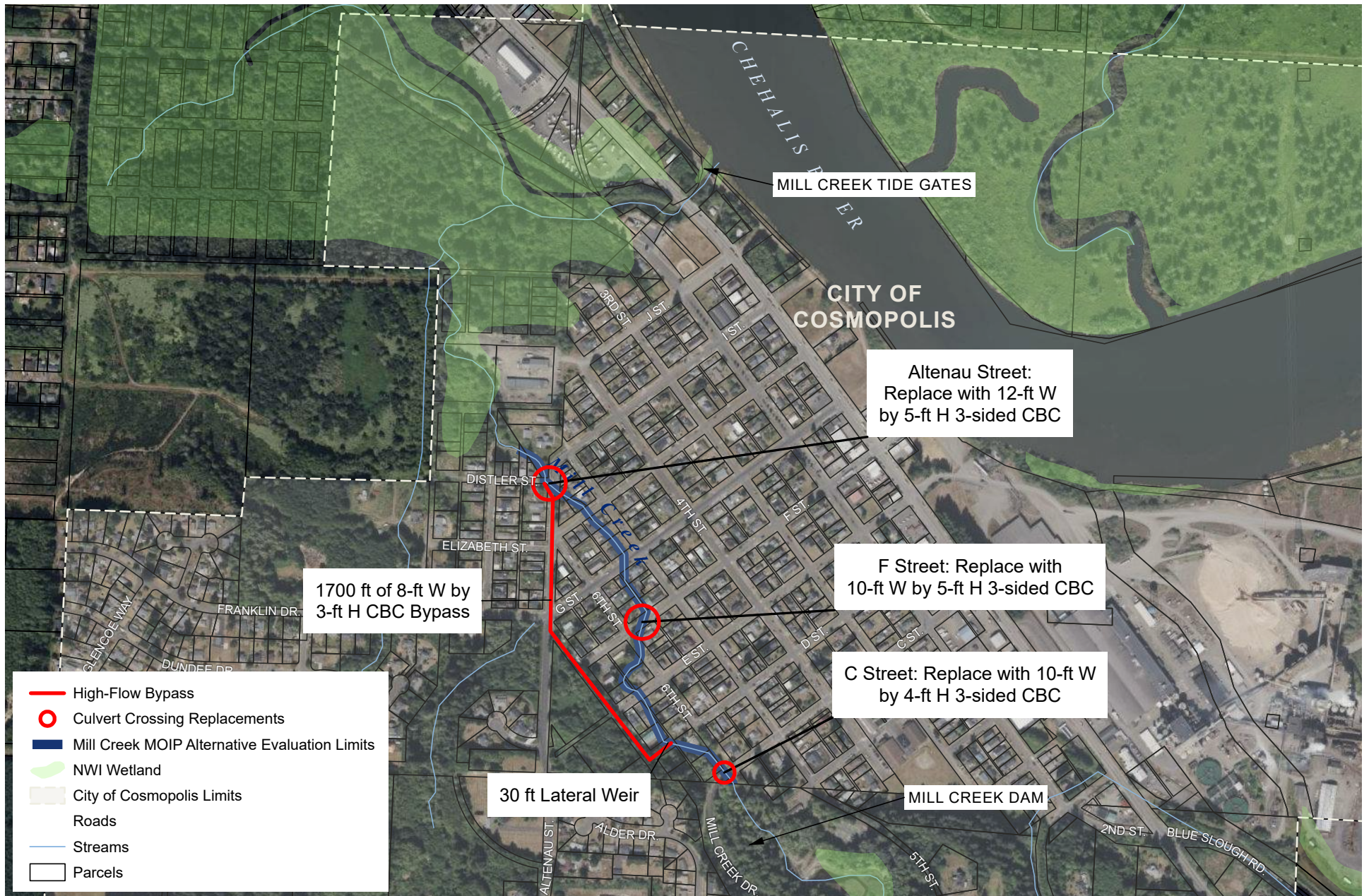
Figure 3-2 shows the culvert replacement, side channel, and new box culvert storm drain locations. Figure 3-3 shows a conceptual layout of the lateral weir.

**Table 3-2. Alternative B proposed improvements**

| Location                                                                   | Proposed culvert type and size                      | Affiliated Improvements                                                                                                                                                           | Stream Conditions                                                                                   |
|----------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| C Street                                                                   | 10 ft wide × 4 ft high 3-sided concrete box culvert | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 15 ft of upstream and downstream bank stabilization and stream bed replacement |
| High-flow bypass 480 ft downstream of C Street crossing in undeveloped ROW | 8 ft wide × 4 ft high reinforced concrete box       | A high-flow bypass consisting of a 30 ft long adjustable sharp-crested side weir and diversion structure. The weir diverts approx. 98 cfs during the 1% chance event.             | Improvements include 20 ft of upstream and downstream bank stabilization and stream bed replacement |
| E Street                                                                   | N/A                                                 | No improvements                                                                                                                                                                   | N/A                                                                                                 |
| F Street                                                                   | 10 ft wide × 5 ft high 3-sided concrete box culvert | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 10 ft of upstream and downstream bank stabilization and stream bed replacement |

| Location       | Proposed culvert type and size                      | Affiliated Improvements                                                                                                                                                           | Stream Conditions                                                                                                                                                     |
|----------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| G Street       | N/A                                                 | No improvements                                                                                                                                                                   | N/A                                                                                                                                                                   |
| H Street       | N/A                                                 | No improvements                                                                                                                                                                   | N/A                                                                                                                                                                   |
| Altenau Street | 12 ft wide × 5 ft high 3-sided concrete box culvert | The box culvert includes a concrete headwall with 45-degree wingwalls; the culvert sides include 5 ft of wall depth and a concrete footing for stabilization and scour resistance | Improvements include 10 ft of upstream and downstream bank replacement and stabilization. Reconnection of an existing storm line that tees directly into the culvert. |

ft = feet; N/A = not applicable.



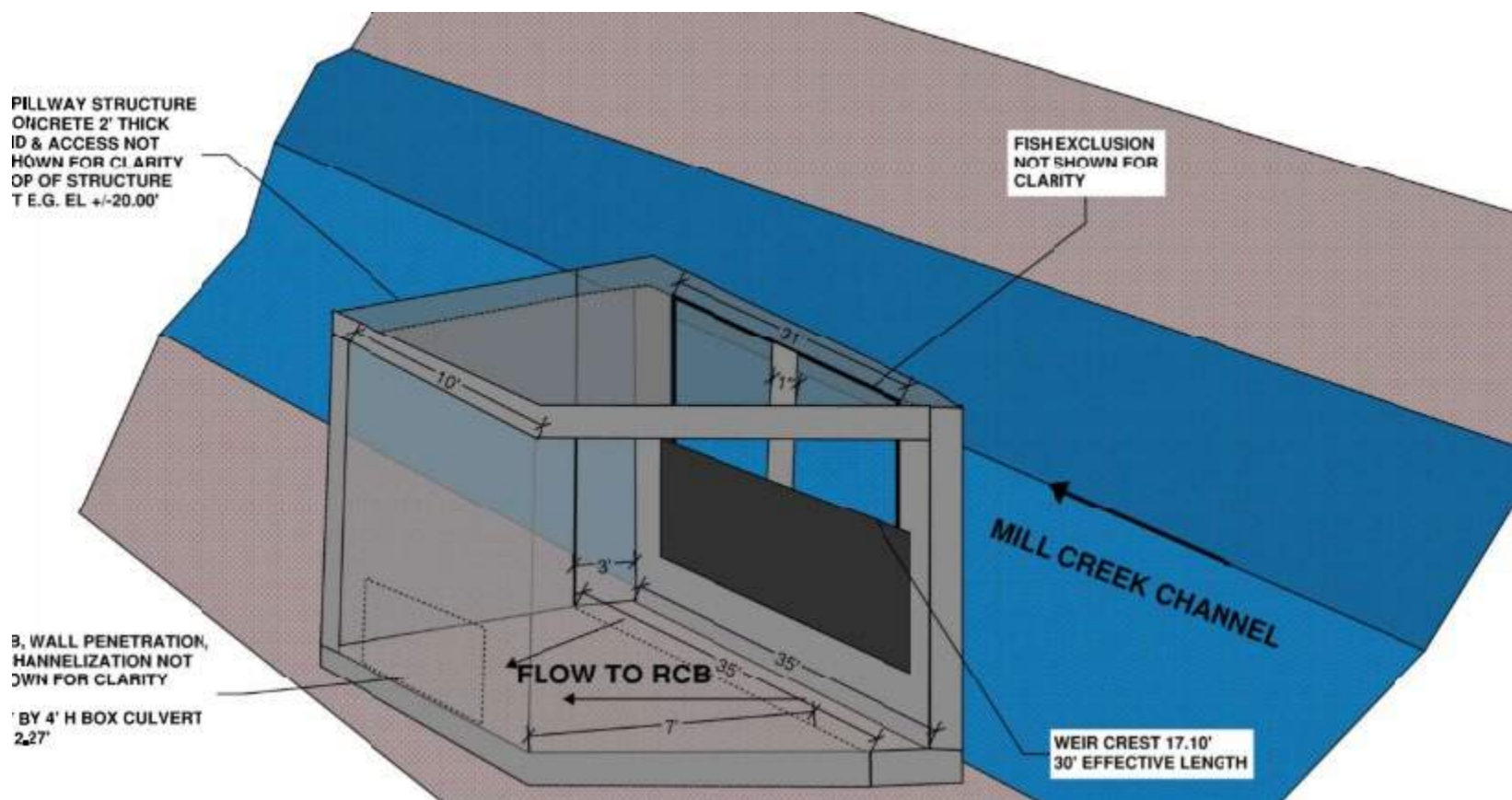


Figure 3-3 Lateral Weir Concept

## 4 Modeling Methodology

This section outlines the methods used to develop hydraulic modeling and the alternatives evaluation matrix scoring criteria.

### 4.1 Hydraulic Modeling and Assumptions

Hydraulic modeling was completed using the United States Army Corps of Engineers (USACE) Hydrological Engineering Center River Analysis System (HEC-RAS) version 6.5. Analysis objectives include:

- Create a one-dimensional (1D) steady-state, step-backwater hydraulic model of existing conditions
- Run sensitivity analysis for downstream WSE and culvert replacements
- Complete preliminary sizing of alternative improvements and associated flood reduction benefits

Prior hydraulic modeling was completed along Mill Creek for the Mill Creek Dam Restoration project in 2017. The 2017 model was expanded to include the MOIP study area from C Street crossing to just downstream of the Altenau Street crossing. The HEC-RAS analysis includes the following inputs:

- Current light detection and ranging (LiDAR) elevation data from the Washington State Department of Natural Resources (2017), which provides high-resolution topographic information
- Surveyed culvert and cross sections of the stream from the Mill Creek MOIP project that provide channel shape and slope at specific locations
- Channel roughness values (called Manning's  $n$ ) for both the channel and overbanks—estimated from site reconnaissance photos and HEC-RAS manual recommendations (see Appendix A for photos)
- Peak flow values and starting WSEs were referenced from the FEMA FIS for Mill Creek at Altenau Street (FEMA 2020)

Where survey data were not available, LiDAR data were used to fill in the gaps for land surface elevation. However, LiDAR cannot accurately capture the shape of the channel bottom because it typically reflects off the water surface and does not penetrate to capture the true depth of the channel. Therefore, for cross sections added between surveyed sections, their channel shapes were modeled as simple trapezoids, with depth and width estimated based on adjacent survey data upstream and downstream.

#### 4.1.1 Tide Gates Sensitivity Hydraulic Model Analysis

USACE installed Mill Creek tide gates as part of the Chehalis River Flood Damage Reduction project in 1996. The structure is composed of steel sheets with driven steel piling. There are three 6-by-6-foot RCBs, three manually operated backup sluice gates on the upstream end, and three vertical hinged flap gates on the downstream end. Refer to Appendix A for a photo of the gates on the downstream end. The gates appear to be hydraulically controlled to hold the gates open through much of the tide range, allowing tidal flushing of the interior drainage channel. When the water reaches a specific height, the tide gates close and create a backwater effect into Mill Creek.

A sensitivity analysis was performed using the 1 percent annual chance event peak discharge referenced from the FEMA FIS to assess if adjustments to the tide gate settings could alleviate flooding along Mill Creek. The analysis included the following:

1. The proposed-condition hydraulic model was completed using the starting WSE of 11.5 feet referenced from the FEMA FIS. The starting WSE reported by FEMA was based on Mill Creek tide gate settings.
  - a. Modeling results indicated that there would be improvements with flows contained within the C, E, and G street crossings. There was a reduction in the flooding area footprint in the upper reach of Mill Creek above G Street.
  - b. Flows overtopped the culverts at Altenau, H, and F streets. Flooding in this area was not alleviated by increasing culvert size and was sensitive to backwater from the Mill Creek tide gates. The model indicated limited reduction in flooded areas near Altenau and H streets.
2. A second proposed-condition hydraulic model was completed for Alternative A, reducing the starting WSE to 8 feet. The results indicate that flows were contained within the upsized culverts. The model indicated a significant reduction in flooded areas along Mill Creek upstream of Altenau Street.

While it may not be feasible to adjust the Mill Creek tide gates to accommodate a WSE drop to 8 feet, additional modeling indicates that even a WSE drop of 1 foot could result in flows being contained in most of the crossings and provide a reduction in the flooding area footprint.

Modeling indicated that flooding along Mill Creek is highly sensitive to the Mill Creek tide gate settings. In addition, culvert replacement alone may not eliminate area flooding along Mill Creek between Altenau Street to upstream of F Street without adjustments or upgrades to the tide gates. It is recommended that additional modeling and a tide gate study be completed to determine if upgrades or replacement of the existing tide gates could improve passage of peak event flows and reduce regionalized flooding between Mill Creek Dam and Altenau Street. The Mill Creek tide gate study and upgrade was added to the Cosmopolis Stormwater Comprehensive Study.

#### 4.1.2 Alternative B High-Flow Bypass Model

Alternative B high-flow bypass was added as a separate river reach with an 8-by-4-foot culvert spanning the length of the bypass reach (1,700 feet). The bypass reach was disconnected from the main channel within the model because HEC-RAS automatically calculates the flow split between two connected reaches. To maintain control over the diversion, flow into the bypass was governed solely by the lateral weir located immediately upstream of the bypass entrance. The weir tailwater was defined as the first cross section of the bypass reach to ensure that all flow passing over the weir was routed directly into the bypass reach. This configuration prevents HEC-RAS from splitting the flow both at the junction and at the lateral weir, thus avoiding double-counting of diverted flow and ensuring that bypass discharge is determined by the weir hydraulics.

The lateral weir was modeled as a lateral structure on the left bank within the Mill Creek reach, just upstream of the bypass reach. The 30-foot-long sharp-crested rectangular weir has a crest elevation that slopes with the channel bed, with an upstream crest elevation of 17.28 feet and the downstream crest elevation of 16.79 feet.

Lateral weirs typically have lower weir coefficients than inline weirs of the same geometry because the approach flow is parallel to the crest rather than perpendicular. As a result, water spills laterally over the weir while the primary flow continues downstream, producing spatially varied flow conditions along the crest and reducing the effective head, contributing to overflow. For this reason, the standard sharp-crested weir coefficient of 3.33 is not applied. Instead, the discharge coefficient is computed using Hager's lateral weir equation. HEC-RAS 6.5 includes a built-in option to apply Hager's lateral weir equation, which computes the weir discharge coefficient while accounting for the angle between the lateral weir and the main channel flow. Because the weir is parallel to the main channel the angle is 0 degrees. This resulted in a computed weir coefficient of approximately 2.8. The weir crest height was iteratively adjusted within the model with the goal of achieving 100 cfs of overflow for the 100-year peak flow; the final configuration achieves a flow of 98.5 cfs over the weir.

## 5 Alternatives Evaluation

This section outlines the steps used to identify and evaluate the benefits and feasibility of each alternative. A total of eight categories were used to assess the alternatives, as listed in Figure 5-1.

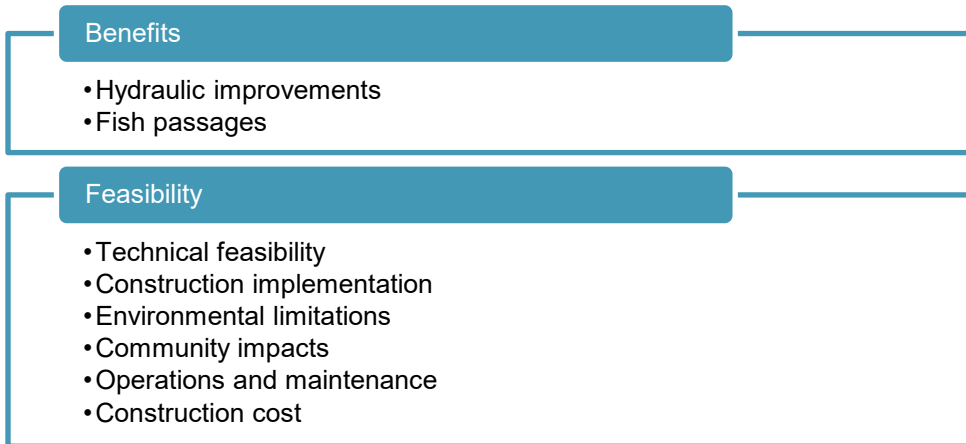


Figure 5-1. Alternatives evaluation criteria

## 5.1 Benefits and Feasibility Assessment Methodology

Each category is assigned a weight that signifies the importance of that category relative to the others; the total weight of all categories equals 1. The alternative's score is multiplied by the weight of the category to give the weighted score. The alternative with the higher total weighted score is more favorable overall.

Alternatives are scored between 1 and 5 in each category, with 1 being less favorable and 5 being more favorable conditions. Scoring criteria for each of the categories are provided in Appendix E and assigned scoring is discussed in Section 5.4.

## 5.2 Benefit Assessment

Two benefits were selected for assessing the alternatives: hydraulic improvements (flood reduction) and fish passage. The following sections discuss both benefit categories and present results from the HEC-RAS model to assess potential benefits.

### 5.2.1 Hydraulic Improvements

The WSE upstream of each culvert crossing was used to determine the flood reduction potential. As mentioned previously, WSE at each culvert crossing is significantly impacted by the tailwater elevation of 11.5 feet, downstream of the Altenau Street culvert.

- **Existing condition:** Road overtopping occurred at all culvert crossings except C Street.
- **Alternative A:** WSEs decreased at all culvert crossings, but road overtopping still occurred at F, H, and Altenau streets. Flooding at these locations is presumed to be caused by the backwater effect caused by the Chehalis River.
- **Alternative B:** WSEs decreased at all culvert crossings, but road overtopping still occurred at F, H, and Altenau streets. In the model, 98.5 cfs was diverted to the RCB bypass, leaving 232.5 cfs in Mill Creek after the lateral weir. WSEs decreased in all culverts downstream of the lateral weir between C and E streets because the flow was

reduced from 331.0 to 232.5 cfs. The C Street crossing WSE decreased because of a lowering of its downstream tailwater elevation to 18.01 feet. Refer to Appendix C for hydraulic modeling profiles. The results with hydraulic grade differential are presented in Table 5-1 below.

**Table 5-1. Water surface elevation at culvert crossings summary**

| Culvert crossing | Road elevation | Existing-condition WSE | Alternative A WSE | Alternative A WSE reduction (ft) | Alternative B WSE | Alternative B WSE reduction (ft) |
|------------------|----------------|------------------------|-------------------|----------------------------------|-------------------|----------------------------------|
| C Street         | 25.81          | 26.28                  | 21.69             | 4.59                             | 21.19             | 5.09                             |
| E Street         | 19.51          | 20.42                  | 18.7              | 1.72                             | 18.05             | 2.37                             |
| F Street         | 16.59          | 18.68                  | 17.23             | 1.45                             | 16.03             | 2.65                             |
| G Street         | 16.01          | 17.21                  | 15.58             | 1.63                             | 15.20             | 2.01                             |
| H Street         | 12.94          | 15.04                  | 13.95             | 1.09                             | 13.82             | 1.22                             |
| Altenau Street   | 12.76          | 13.72                  | 13                | 0.72                             | 12.97             | 0.75                             |

## 5.2.2 Fish Passage

The reduction in flow velocity from culvert replacement has the potential to improve fish passage. Maximum fish-passage velocities according to WDFW (2013) are 4 feet per second (fps) for culverts 10 to 100 feet long and 3 fps for culverts 100 to 200 feet long. Although coho salmon currently pass through the existing culverts, the existing culverts' flow velocities exceed WDFW (2013) requirements.

The Mill Creek channel is located across various private properties, and bank widths constrain the ability for channel improvements and the feasibility of wider culvert crossings. The proposed culvert crossing sizes could improve upon the existing condition where site constraints allow. It is also recommended that the culvert crossings use three-sided boxes that span the channel and allow a more natural channel floor while lowering flow velocity. A cursory inspection of the bankfull width of the natural channel downstream of the Altenau Street crossing indicates that a culvert width of at least 18 feet would be needed to satisfy WDFW (2013) requirements.

The average culvert length over the six crossings is approximately 83 feet, ranging from 45 feet at C Street to 122 feet at F Street. Table 5-2 summarizes flow velocity reductions using the 20-year storm event flow of 115 cfs.

**Table 5-2. Culvert flow velocity for the 20-year storm (115 cfs)**

| Culvert crossing | Existing condition (fps) | Alternative A (fps) | Alternative B (fps) |
|------------------|--------------------------|---------------------|---------------------|
| C Street         | 11.08                    | 7.18                | 7.18                |
| E Street         | 6.46                     | 5.79                | 5.76                |
| F Street         | 4.52                     | 5.92                | 4.34                |
| G Street         | 5.28                     | 4.97                | 4.06                |

| Culvert crossing | Existing condition (fps) | Alternative A (fps) | Alternative B (fps) |
|------------------|--------------------------|---------------------|---------------------|
| H Street         | 2.86                     | 2.37                | 1.76                |
| Altenau Street   | 2.94                     | 2.03                | 2.04                |

As shown in Table 5-2, Alternatives A and B both show reduction in the velocity at all six culverts. Alternative A velocities improved because of the increase in effective area of each of the culverts. Alternative B shows a greater reduction in velocities between E and H streets than Alternative A because of the high-flow bypass lowering the flow through those culverts.

## 5.3 Feasibility Evaluation

The feasibility assessment was grouped into the following six categories:

- Technical feasibility (design complexity)
- Construction implementation challenges (utility conflicts, groundwater, staging/access, contaminated materials)
- Environmental limitations (sensitive areas, permitting)
- Community impacts (easements, detours)
- Operations and maintenance (O&M)
- Construction cost

Each category and specific factors influencing the score given for the alternatives are discussed in the following sections.

### 5.3.1 Technical Feasibility

Alternative A would require standard engineering methods to design the proposed culvert replacements. Alternative B would require more complex design to prevent fish from entering the bypass culvert, and more extensive modeling to accurately predict flow diversion between the two channels.

### 5.3.2 Construction Implementation Challenges

Both alternatives have utility conflicts. Alternatives A and B would require approximately 30 feet of water mainline replacement at all replaced culverts and approximately 60 feet of water mainline replacement at the Altenau Street crossing.

Alternative B's bypass conveyance route would require approximately 580 feet of stormwater, 120 feet of sewer, and 150 feet of water replacements and realignments along the Altenau Street corridor.

Both alternatives have accessibility issues and would require temporary construction easements at the culvert crossings. Alternative B lacks drivable access to the bypass weir location and a maintenance access road would need to be constructed to this location.

Construction of the Alternative B bypass would require a longer construction window than Alternative A and would require a detailed schedule that considers construction during fish windows.

The Alternative B RCB bypass would pass near a rock outcrop and through an existing spring near the F Street projected ROW. Environmental controls and/or permitting restrictions may be required to address these challenges. Construction may disrupt the existing spring and the regulatory and permitting requirements could cause delays during both the design and construction phases. There is potential that this route could be infeasible.

### 5.3.3 Environmental and Permitting

Both alternatives would require numerous permits/approvals including State Environmental Policy Act (SEPA) determination, Clearing and Grading, United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) consultation, tribal approval, Section 401 Water Quality Certification, Hydraulic Project Approval, and a Construction Stormwater General Permit because the disturbance area is greater than 1 acre. Alternative B may also require a Critical Areas Exception Approval and a Nationwide Permit for wetland impact (because of the slope excavation and surface spring disturbance southwest of the flow diversion weir).

### 5.3.4 Community Impacts

Temporary construction easements will be needed for both alternatives from adjacent property owners. Based on conceptual design there are four adjacent property owners for Alternative A and six for Alternative B. A permanent slope easement would be needed for the two parcels located southwest of the flow diversion weir. All six street crossings would require temporary road closures for Alternative A, and Alternative B would temporarily close C, F, and Altenau streets.

### 5.3.5 Operations and Maintenance

Alternative A proposes replacement of existing culvert and would not add to the existing O&M burden. Alternative B includes a fish screen, lateral weir, diversion structure, and 1,700 feet of RCB conveyance. Because of the length of the RCB bypass (approximately 1,700 feet), removal of any blockage would be difficult using conventional methods. Frequent inspections/maintenance would be needed for any gravity fish screens installed as part of the Alternative B design. Additional equipment or contracting with private sources may be required.

### 5.3.6 Opinion of Probable Construction Cost

Association for the Advancement of Cost Engineering (AACE) Class 5 estimates were prepared for each alternative to allow for a cost comparison. Direct construction costs, not including indirect costs, for Alternative B are approximately \$4.1 million higher than Alternative A because of construction of the bypass weir structure and 1,700 feet of

conveyance. Alternative B also has a greater design complexity and more extensive permitting, and presents challenging construction implementation conditions. OPCC estimates are provided in Appendix D and the results are summarized in Table 5-3

**Table 5-3. OPCC summary (2026 dollars)**

| Alternative   | Low range<br>(-50%) | Total project cost | High range<br>(+100%) |
|---------------|---------------------|--------------------|-----------------------|
| Alternative A | \$7,840,250         | \$15,680,500       | \$31,361,000          |
| Alternative B | \$12,274,850        | \$24,549,700       | \$49,099,000          |

## 5.4 Alternative Evaluation Scoring

The results of the alternative evaluation scoring are presented in Table 5-4.

**Table 5-4. Alternative Evaluation Matrix Criteria and Score**

| Assessment category                        | Criterion                   | Weighting factor <sup>a</sup> | Alternative A      |                             | Alternative B      |                             |
|--------------------------------------------|-----------------------------|-------------------------------|--------------------|-----------------------------|--------------------|-----------------------------|
|                                            |                             |                               | Score <sup>b</sup> | Weighted score <sup>c</sup> | Score <sup>b</sup> | Weighted score <sup>c</sup> |
| <b>Benefits</b>                            | Hydraulic improvements      | 0.25                          | 4                  | 0.40                        | 4                  | 0.80                        |
|                                            | Fish passage                | 0.20                          | 3                  | 0.30                        | 3                  | 0.15                        |
| <i>Benefits subtotal weighted score</i>    |                             |                               |                    | <i>0.70</i>                 |                    | <i>0.95</i>                 |
| <b>Feasibility</b>                         | Technical feasibility       | 0.10                          | 3                  | 0.15                        | 2                  | 0.05                        |
|                                            | Construction implementation | 0.10                          | 3                  | 0.36                        | 1                  | 0.24                        |
|                                            | Environmental limitations   | 0.08                          | 4                  | 0.32                        | 1                  | 0.08                        |
|                                            | Community impacts           | 0.05                          | 3                  | 0.10                        | 2                  | 0.10                        |
|                                            | Operations and maintenance  | 0.07                          | 5                  | 0.30                        | 2                  | 0.10                        |
|                                            | Construction cost           | 0.15                          | 2                  | 0.50                        | 1                  | 0.25                        |
| <i>Feasibility subtotal weighted score</i> |                             |                               |                    | <i>1.73</i>                 |                    | <i>0.82</i>                 |
| <b>Total weighted score</b>                |                             |                               |                    | <b>3.32</b>                 |                    | <b>2.37</b>                 |

<sup>a</sup> Weight factor: A higher weight factor indicates a greater importance assigned to this category.

<sup>b</sup> Score: Scores range from 1 for least favorable to 5 for more favorable. See Appendix E for rating criteria descriptions.

<sup>c</sup> Weighted score: Equals weight factor times the score.

## 6 Summary and Recommendations

This section summarizes the evaluation and presents recommendations for the Cosmopolis MOIP.

## 6.1 Recommended Alternative

Alternative A is recommended for implementation for the following reasons:

- Alternative A received a higher total weighted score (3.32) than Alternative B (2.37).
- While Alternative B would provide slightly better hydraulic performance than Alternative A, the WSE reduction at all the culverts was less than 1 foot. A greater flood reduction benefit is associated with reducing the backwater effect from the Mill Creek tide gates.
- Alternative A scored lower on the risk assessment. A copy of the risk assessment is provided with each estimate in Appendix D.
- The cost of Alternative A would be approximately \$10.5 million less than Alternative B.
- Alternative A outperformed Alternative B in technical feasibility. Alternative B was found to have greater challenges related to construction complexity and environmental impact.

### 6.1.1 Tide Gate Study Recommendation

Hydraulic modeling indicates that Mill Creek is strongly affected by the downstream WSE where it meets the Chehalis River, which is tidally influenced. This backwater effect contributes to widespread flooding in residential areas along Mill Creek. A tide gate study is recommended to assess whether modifications to the existing tide gates could help lower downstream water levels, potentially reducing flooding in Mill Creek.

The tide gate study and any recommended upgrades to the existing tide gates is recommended as a high priority.

### 6.1.2 Alternative A Culvert Replacement Prioritization

Alternative A proposes that all six culverts within the evaluation area be replaced. It is recommended that the culvert crossings be replaced in order of downstream first and proceeding upstream. This will reduce the likelihood that replacement may increase flooding because of backwater from a downstream culvert constriction.

The recommended replacement priority (from highest to lowest) is as follows:

1. Altenau Street
2. H Street
3. G Street
4. F Street
5. E Street
6. C Street

## 7 References

City of Cosmopolis

1998 Mill Creek Operations and Maintenance Manual.

FEMA (Federal Emergency Management Agency)

2020 Flood Insurance Study (FIS) for Grays Harbor County and Incorporated Areas.

HDR (HDR Engineering, Inc.)

2015 Technical Memorandum: *Mill Creek Dam Improvements Project Fish Passage Criteria and Assessment of Alternatives*.

NRCS (Natural Resources Conservation Service)

2011 Web Soil Survey.

WDFW (Washington Department of Fish and Wildlife)

2013 *Water Crossings Design Guidelines*.

## Appendix C. CIP Detailed Scoring Criteria

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Table C.1. City of cosmopolis stormwater comprehensive plan capital improvement plan and prioritization chart

| Rank | CIP Project No.  | PROJECT                                                            | PLANNED<br>START YEAR | ESTIMATED TOTAL<br>PROJECT DURATION<br>(MONTHS) | EST. TOTAL<br>PROJECT COST (\$)¹. | LOCATION<br>(NORTHING/EASTING)                                                        | ADDRESS OR LOCATION<br>DESCRIPTION                             | PROJECT SUMMARY DESCRIPTION                                                                                                                                                |
|------|------------------|--------------------------------------------------------------------|-----------------------|-------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | COSI-SW-2026-001 | Mill Creek Tide Gate Study and Design                              | 2028                  | 20                                              | \$769,300                         | 822746.2, 610330.8                                                                    | Mill Creek Upstream of the Chehalis River Confluence           | Tide gate study with H&H modeling, survey, alternatives analysis to mitigate inland flooding, and concept design for cost estimates. Preliminary design would be included. |
| 2    | COSI-SW-2026-002 | Mill Creek Tide Gate Improvements                                  | 2029                  | 14                                              | \$4,172,800                       | 822746.2, 610330.8                                                                    | Mill Creek Upstream of the Chehalis River Confluence           | Mill Creek tide gate improvements                                                                                                                                          |
| 3    | COSI-SW-2026-003 | Mill Creek Alenau St., H St., & G St. Culvert Crossing Replacement | 2030                  | 30                                              | \$8,998,300                       | Alenau St: 822746.2, 610330.8<br>H St: 822112.8, 608535.6<br>G St: 822315.2, 608318.8 | Mill Creek culverts crossing Alenau St., H St., and G St.      | Replace and upsize culverts to mitigate upland flooding from Mill Creek                                                                                                    |
| 4    | COSI-SW-2026-004 | Mill Creek F St., E St.& C St. Culvert Crossing Replacement        | 2035                  | 30                                              | \$8,681,600                       | F St: 822426.8, 608012.3<br>E St: 822375.9, 607602.8<br>C St: 822823, 607184.6        | Mill Creek culverts crossing at F St., E St., and C St.        | Replace and upsize culverts to mitigate upland flooding from Mill Creek                                                                                                    |
| 5    | COSI-SW-2026-005 | F St. NE of 1st St. Flooding & E St. Outfall Improvements          | 2036                  | 18                                              | \$1,986,400                       | 824153.1, 608923.2                                                                    | Northeast of F Street/1st Street to the E Street Outfall       | Replace broken pipe under 1st Street Mini-Mart parking lot and upsize several pipes near E Street outfall to mitigate flooding                                             |
| 6    | COSI-SW-2026-006 | J St. at 4th St. Flooding & 2nd St. Outfall Improvements           | 2038                  | 18                                              | \$3,408,700                       | 822519.3, 610070.7                                                                    | Southwest of J Street and 1th Street to the 2nd Street Outfall | Upsize several pipes near 2nd Street outfall and along J Street to mitigate flooding                                                                                       |



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**Table C-2. CIP prioritization scoring lookup**

| Flooding | Flooding Score | Regulatory Drivers <sup>1</sup> | Regulatory Score | Environmental | Environmental Score | Other | Other Score | Raw Score |
|----------|----------------|---------------------------------|------------------|---------------|---------------------|-------|-------------|-----------|
| Critical | 4              | Critical                        | 4                | High          | 3                   | N/A   | 0           | 2.83      |
| Critical | 4              | Critical                        | 4                | Moderate      | 2                   | N/A   | 0           | 2.67      |
| Critical | 4              | High                            | 3                | Moderate      | 2                   | N/A   | 0           | 2.50      |
| High     | 3              | Moderate                        | 2                | Moderate      | 2                   | N/A   | 0           | 2.00      |
| Moderate | 2              | N/A                             | 0                | Low           | 1                   | N/A   | 0           | 1.17      |
| Moderate | 2              | N/A                             | 0                | Low           | 1                   | N/A   | 0           | 1.00      |

**Table C-3. CIP prioritization scoring criteria descriptions**

| SCORING CRITERIA DESCRIPTIONS |          |                                                                                                                                                             |
|-------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CATEGORY                      | SCORE    | DESCRIPTION                                                                                                                                                 |
| Reliability                   | Critical | Failure may be imminent and construction scheduled as soon as possible.                                                                                     |
|                               | High     | Frequent maintenance with planned replacement or major repair/O&M costs within 2-5 years.                                                                   |
|                               | Moderate | Elevated maintenance costs/concerns with planned replacement or major repair/O&M costs within 5-15 years                                                    |
|                               | Low      | Planned replacement or repairs within +15 years.                                                                                                            |
|                               | N/A      | Not applicable or costs are outside of 50 year window.                                                                                                      |
| Capacity Constrained          | Critical | Severe constraint that affects more than one area and/or elevated concerns for damage to infrastructure/property. Replacement to be schedule as a priority. |
|                               | High     | Deficiency affects neighborhood and/or elevated concerns for damage to infrastructure/property                                                              |
|                               | Moderate | Localized deficiency                                                                                                                                        |
|                               | Low      | Minimal capacity concerns or capacity needs outside of +20 year window                                                                                      |
|                               | N/A      | Not applicable                                                                                                                                              |
| Flooding                      | Critical | Multiple neighborhood flooding or potential high damage costs due to flooding.                                                                              |
|                               | High     | Neighborhood flooding concerns                                                                                                                              |
|                               | Moderate | Localized flooding concerns                                                                                                                                 |
|                               | Low      | Minimal flooding concerns                                                                                                                                   |
|                               | N/A      | Not applicable                                                                                                                                              |

| SCORING CRITERIA DESCRIPTIONS |          |                                                                                                                                                                                                                                                                                            |
|-------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CATEGORY                      | SCORE    | DESCRIPTION                                                                                                                                                                                                                                                                                |
| Regulatory Drivers            | Critical | Immediate risk to<br>1. Managed permit water quality order (WQO), < 5-year repeat combined sewer overflows (CSO)s,<br>2. lower-watershed fish barrier,<br>3. Mandate from National Pollutant Discharge Elimination System (NPDES), permit<br>4. Legal action or Labor and Industries (L&I) |
|                               | High     | Ongoing risk to:<br>1. managed permit, < 10-year repeat CSOs<br>2. Mid-watershed fish barrier<br>3. Known employee safety hazard (non-mandatory)                                                                                                                                           |
|                               | Moderate | Minor risk to:<br>1. Managed permit, < 20-year repeat CSOs<br>2. Upper-watershed fish barrier<br>3. Low-risk update in safety Codes                                                                                                                                                        |
|                               | Low      | Low risk for managed permit                                                                                                                                                                                                                                                                |
|                               | N/A      | Not applicable.                                                                                                                                                                                                                                                                            |
| Environmental                 | Critical | Arterial runoff WQ improvement, or relocates/removes pipe from stream/wetland, or major stream/riparian enhancement                                                                                                                                                                        |
|                               | High     | Collector runoff WQ, eliminates septic system(s), replaces pipe/facility in fish-bearing stream/wetland, moderate stream/riparian enhancement                                                                                                                                              |
|                               | Moderate | Local street WQ improvement, or replaces pipe/facility in a non-fish-bearing stream/wetland, or minor stream/riparian enhancement                                                                                                                                                          |
|                               | Low      | Limited or localized improvement or improvement in a non-fish bearing area.                                                                                                                                                                                                                |
|                               | N/A      | Not applicable or does not present improvement to water body.                                                                                                                                                                                                                              |
| Other                         | Critical |                                                                                                                                                                                                                                                                                            |
|                               | High     |                                                                                                                                                                                                                                                                                            |
|                               | Moderate |                                                                                                                                                                                                                                                                                            |
|                               | Low      |                                                                                                                                                                                                                                                                                            |
|                               | N/A      | Not applicable                                                                                                                                                                                                                                                                             |

Table C-4. WDFW identified fish passage within project vicinity

| WASHINGTON STATE WDFW FISH PASSAGE |                           |          |          |              |             |                   |          |                   |          |                |                  |            |                                            |             |             |                      |                                               |                          |                         |                                                                                                                                                                                             |             |              |
|------------------------------------|---------------------------|----------|----------|--------------|-------------|-------------------|----------|-------------------|----------|----------------|------------------|------------|--------------------------------------------|-------------|-------------|----------------------|-----------------------------------------------|--------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|
| OBJECTID                           | Road Name                 | Easting  | Northing | Feature Type | Stream Name | Tributary To Name | Fish Use | Fish Use Criteria | Barrier? | Barrier Reason | Percent Passable | Owner Type | Data Source                                | Survey Date | Lineal Gain | Priority Index Total | Potential Species                             | Barrier Correction Years | Significant Reach?      | Total Passage Summary Report                                                                                                                                                                | WRIA Number | SiteID       |
| 16752                              | Dike Rd (aka Altheau St)  | 822746.2 | 610330.8 | Culvert      | Mill Cr     | Chehalis R        | Yes      | Mapped            | Yes      | Tidegate       | 0                | City       | Lewis Co Conservation District             | 3/21/2006   |             |                      | Coho, Steelhead, SR Cutthroat, Resident Trout |                          | Unknown                 | <a href="https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14G_Report.pdf">https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14G_Report.pdf</a> | 22          | 125 1709W14G |
| 16603                              | G St                      | 822315.2 | 608318.8 | Culvert      | Mill Cr     | Chehalis R        | Yes      | Mapped            | Yes      | Slope          | 33               | City       | Washington Department of Fish and Wildlife | 7/24/2017   |             |                      | Coho, Steelhead, SR Cutthroat, Resident Trout |                          | <a href="#">Yes</a>     | <a href="https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14D_Report.pdf">https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14D_Report.pdf</a> | 22          | 125 1709W14D |
| 16565                              | E St                      | 822375.9 | 607602.8 | Culvert      | Mill Cr     | Chehalis R        | Yes      | Mapped            | Yes      | Depth          | 33               | City       | Washington Department of Fish and Wildlife | 8/7/2017    |             |                      | Coho, Steelhead, SR Cutthroat, Resident Trout |                          | <a href="#">Unknown</a> | <a href="https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14B_Report.pdf">https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14B_Report.pdf</a> | 22          | 125 1709W14B |
| 16544                              | Mill Cr Dr (aka C Street) | 822823   | 607184.6 | Culvert      | Mill Cr     | Chehalis R        | Yes      | Mapped            | Yes      | Slope          | 33               | City       | Washington Department of Fish and Wildlife | 8/7/2017    |             |                      | Coho, Steelhead, SR Cutthroat, Resident Trout |                          | <a href="#">Yes</a>     | <a href="https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14A_Report.pdf">https://fortress.wa.gov/dfw/public/fishpassagephotos/reports/125%201709W14A_Report.pdf</a> | 22          | 125 1709W14A |



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## Appendix D. Capital Improvement Project Summary Sheets

D.1 – Tide Gate Study

D.2 – Tide Gate Improvements

D.3 – Lower Mill Creek Culvert Replacement

D.4 – Upper Mill Creek Culvert Replacement

D.5 – E St Outfall

D.5 - 2nd St Outfall

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## D.1 – Tide Gate Study

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## PROJECT SUMMARY SHEET

|                                |                                            |
|--------------------------------|--------------------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-001                           |
| <b>PROJECT NAME</b>            | Mill Creek Tide Gate Study                 |
| <b>DATE</b>                    | 3/23/2026                                  |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)<br>Jess Dexheimer (HDR) |
| <b>CC OR DISTRIBUTION LIST</b> | Click or tap here to enter text.           |

### PROJECT DESCRIPTION

Mill Creek flows to Chehalis River through the City of Cosmopolis, WA via six culverts between C Street and Altenau Street. The water level in Mill Creek is partly controlled by the tide gates located at the confluence of Mill Creek and Chehalis River to the north of Cosmopolis. Persistent flooding has been observed at these culverts.

Model simulation has identified several potential causes of flooding, including undersized culverts and backwatering caused by the tide gates. This simulation showed that a lower water surface elevation (WSE) downstream of the culverts could alleviate inland flooding in the city. The size and operation of the tide gates could potentially reduce the WSE downstream before peak flows in Mill creek and reduce flooding. Furthermore, current staff at the City do not have the institutional knowledge of tide gates operations. As a result, a tide gate study is recommended to survey the existing flow conditions at Mill Creek, and to model and improve future flow conditions to eliminate upstream inland flooding.

See Figure 1 for project vicinity map and Figure 2 for an overview of the existing tide gates.



COSI-SW-2026-001 MILL CREEK TIDE GATE STUDY

Figure 1. Tide gate project vicinity map and project overview



**Figure 2. Existing Tide Gates**



### PROJECT COST

The project cost has been estimated from a similarly scoped tide gate study performed by HDR in Grays Harbor County. The cost of conducting this tide gate study will be approximately **\$770,000**. This project cost was developed in 2026 dollars, and a 2% inflation was applied for each year until the project's assumed start year of 2028.

See the attached estimate for breakout of costs.

### PROBLEM STATEMENT

Tide gates on Mill Creek stay open to a pre-determined elevation during incoming tides, then would automatically close and stay closed during high tides or a flood event. While the upstream communities are protected from compounded flooding during high tides events, the fixed elevation does not allow water to be discharged as quickly as possible from the creek during low tides. This may cause water to backup into Mill Creek's upstream basin, exacerbating flooding in an already under-sized system.

However, the lack of understanding of the existing operation poses a challenge to properly manage creek water level in face of compounded tidal and inland flooding. A tide gate study, including survey and modeling, is needed to understand how the existing operations mitigate stormflow in upstream basins, both during low-tide and high-tide scenarios.

### PROJECT GOALS

The project aims to enhance the understanding of existing operating conditions of the Mill Creek tide gates with field reconnaissance and hydrologic and hydraulic models. Potential upgrades and adjustments would be recommended to address the compound flooding issues at Mill Creek.

### PROJECT SCOPE

1. Existing data collection and review:
  - a. Review reference material, including gate record drawings, tidal and Flood Insurance Study data, and City operations and maintenance (O&M) data
  - b. Field Reconnaissance and documentation
  - c. Survey existing tide gate and Mill Creek Channel and use Lidar to generate updated and expanded topography.
2. Perform hydrologic & hydraulic modeling on existing and adjusted flow conditions
  - a. SWMMM
  - b. 2D HEC-RAS
  - c. Tidal and sea level rise analysis
3. Alternatives Analysis
  - a. Tide gate upgrade or adjustment recommendations
  - b. Tide gate upgrade concept development
  - c. Three cost estimates
4. Technical Memorandum
  - a. Document current gate operation, extent of upstream inundation, and modeling findings

- b. Identify any deficiencies with the current gate and channel conditions
  - c. Summarize tide grade upgrade or adjustment recommendations
  - d. Include lists of permits needed for the work
5. Design 20%-100%
- a. PS&E (tide gate; fish passage would make it more complex)
  - b. H&H modeling update allowance
  - c. Permitting Analysis

## GEOTECHNICAL

Soils information for the project area was obtained from Natural Resources Conservation Service's (NRCS) online Web Soil Survey. Soils within the project area are primarily Mopang Silty Loam which is described as well or moderately well drained soils that formed in glaciofluvial sediments. A specific project geotechnical investigation is recommended early in the design process.

## UTILITIES

No utility conflicts anticipated with this project. Tide gates are located at confluence of Chehalis River and Mill Creek and no known utilities are shown from review of City provided as-builts. Utilities are unlikely to be in this area due to proximity to the coast and main lines being located more inland to service residential and business areas.

## ANTICIPATED MAJOR PERMITS

Study includes permit analysis to identify potential permits for the selected tide gate improvements design. These permits may include:

- State Environmental Policy Act (SEPA) review
- Hydraulic Project Approval from Washington Department of Fish and Wildlife
- Shoreline substantial development permit (SSDP)
- U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)
- Other local Grays Harbor County permit

## REAL ESTATE AND EASEMENT

No real estate or easements required for tide gate study. Coordinate site visits with the City.

## STAKEHOLDERS

| STAKEHOLDERS                               |                                                |
|--------------------------------------------|------------------------------------------------|
| NAME                                       | INTEREST                                       |
| Cosmopolis residents along Mill Creek      | Reducing flooding risks                        |
| Army Corps of Engineers                    | Evaluating flood plain and dam control         |
| Washington Department of Ecology           | Floodplain restoration and stream bank erosion |
| Washington Department of Fish and Wildlife | Fish and wildlife protection and fish passage  |
| Click or tap here to enter text.           | Click or tap here to enter text.               |
| Click or tap here to enter text.           | Click or tap here to enter text.               |

## **ASSOCIATED PROJECTS**

- COSI-SW-2026-002 Mill Creek Tide Gate Improvements
- COSI-SW-2026-003 Lower Mill Creek Altenau St., H St., G St. and F St. Culvert Crossing Replacement
- COSI-SW-2026-004 Upper Mill Creek F St., E St. and C St. Culvert Crossing Replacement
- COSI-SW-2026-005 J St./4th St. Flooding and 2nd St. Outfall Improvements

## **ASSUMPTIONS, CONSTRAINTS, RISKS**

### **ASSUMPTIONS**

- City will provide gate record drawings and O&M data.
- Up to 3 alternatives will be evaluated:
  - Replace tide gates
  - Change tide gate operation
  - Add a pump station
- Cost estimate and scope are based on tide gate replacement, project scope and estimate may change based on chosen alternative.

### **RISKS AND CONSTRAINTS**

#### **Project Management Risk**

- Budget constraints or inflexibility from project grant funding.

#### **Project City Team Risk**

- Staff turnover may cause schedule delays.

#### **Project Complexity Risk**

- QA/QC error or omission could cause potential schedule or cost impacts.

### **OPPORTUNITIES**

N/A

### **EXCLUSIONS**

N/A

| Estimate - AACE Class 5         |                                                                                                                                     |  |          |                            |                                                               |            |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--|----------|----------------------------|---------------------------------------------------------------|------------|
| Agency:                         | City of Cosmopolis                                                                                                                  |  |          | Estimator(s):              | Xiating Chen (HDR)<br>Theo Malone (HDR)<br>Cindy Kinzer (HDR) |            |
| Project Name:                   | Mill Creek Tide Gate Study                                                                                                          |  |          | Date Prepared:             | 3/10/2026                                                     |            |
| Location:                       | Upstream of Mill Ck. Chehalis River Confluence                                                                                      |  |          | Version:                   | 1                                                             |            |
| Description:                    | Tide Gate Study with H&H modeling, Survey, Alternatives Analysis to Mitigate inland flooding, and Concept Design for Cost Estimates |  |          | Revision Date:             | N/A                                                           |            |
| DIRECT: SUBTOTAL COSTS          |                                                                                                                                     |  |          |                            |                                                               |            |
| Item No.                        | Item Description                                                                                                                    |  | Quantity | Units                      | Unit Cost                                                     | Item Cost  |
| 1                               | Tide gate study                                                                                                                     |  | 1        | LS                         | \$ 272,000.00                                                 | \$ 272,000 |
| 2                               | Tide gate preliminary, geotechnical, and design engineering (@ 17% of Tide Gate Improvements direct construction costs)             |  | 1        | LS                         | \$ 432,540                                                    | \$ 432,540 |
|                                 |                                                                                                                                     |  |          |                            | \$                                                            | -          |
|                                 |                                                                                                                                     |  |          |                            | \$                                                            | -          |
|                                 |                                                                                                                                     |  |          |                            | \$                                                            | -          |
| TOTAL DIRECT COSTS              |                                                                                                                                     |  |          |                            | \$                                                            | 704,540    |
| Contingency (@5%)               |                                                                                                                                     |  |          |                            | \$                                                            | 35,200     |
| TOTAL COST (YEAR 2026)          |                                                                                                                                     |  |          |                            | \$                                                            | 739,700    |
|                                 |                                                                                                                                     |  |          | Inflation to Mid-year Work | \$                                                            | 29,588     |
| ADJUSTED TOTAL COST (YEAR 2028) |                                                                                                                                     |  |          |                            | \$                                                            | 769,300    |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2028                  |

| Estimate - AACE Class 5 |                                                                                                                           |          |       |                                       |                                                               |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------|----------|-------|---------------------------------------|---------------------------------------------------------------|
| <b>Agency:</b>          | City of Cosmopolis                                                                                                        |          |       | <b>Estimator(s):</b>                  | Xiating Chen (HDR)<br>Theo Malone (HDR)<br>Cindy Kinzer (HDR) |
| <b>Project Name:</b>    | Mill Creek Tide Gate Study                                                                                                |          |       | <b>Date Prepared:</b>                 | 3/10/2026                                                     |
| <b>Location:</b>        | Upstream of Mill Ck. Chehalis River Confluence                                                                            |          |       | <b>Version:</b>                       | 1                                                             |
| <b>Description:</b>     | Tide Gate Study with H&H modeling, Survey, Alternatives Analysis to Mitigate inland flooding, and Concept Design          |          |       | <b>Revision Date:</b>                 | N/A                                                           |
|                         |                                                                                                                           |          |       |                                       |                                                               |
| Task No                 | Item Description                                                                                                          | Quantity | Units | Task Unit Cost                        | Task Cost                                                     |
| 1                       | <b>Task 100 Project Management, Team and Client Coordination</b>                                                          | 10%      | LS    | \$ 272,000                            | \$ 27,200                                                     |
| 2                       |                                                                                                                           |          |       |                                       |                                                               |
| 3                       | <b>Existing Data Collection &amp; Review</b>                                                                              |          |       |                                       | \$ -                                                          |
| 4                       | Review Reference Material and Kickoff Meeting                                                                             | 1        | LS    | \$ 15,000                             | \$ 15,000                                                     |
| 5                       | Field reconnaissance and documentation                                                                                    | 1        | LS    | \$ 12,000                             | \$ 12,000                                                     |
| 6                       | Survey Sections in Mill Creek Channel (spots only if needed) and downstream of the Tide Gate to Chehalis River Confluence | 1        | LS    | \$ 16,000                             | \$ 16,000                                                     |
| 7                       | Generate topography from LiDAR and survey data                                                                            | 1        | LS    | \$ 7,000                              | \$ 7,000                                                      |
| 8                       |                                                                                                                           |          |       |                                       |                                                               |
| 9                       | <b>Hydrologic and Hydraulic Assessment</b>                                                                                |          |       |                                       |                                                               |
| 10                      | SWMM-based modeling                                                                                                       | 1        | LS    | \$ 30,000                             | \$ 30,000                                                     |
| 11                      | 2D HEC-RAS                                                                                                                | 1        | LS    | \$ 50,000                             | \$ 50,000                                                     |
| 12                      | Tidal and Sea Level Rise analysis                                                                                         | 1        | LS    | \$ 10,000                             | \$ 10,000                                                     |
| 13                      |                                                                                                                           |          |       |                                       | \$ -                                                          |
| 14                      | <b>Alternatives Analysis</b>                                                                                              |          |       |                                       | \$ -                                                          |
| 15                      | Tide gate upgrade or adjustment recommendations                                                                           | 1        | LS    | \$ 30,000                             | \$ 30,000                                                     |
| 16                      | Tide gate upgrade concept development and figures                                                                         | 1        | LS    | \$ 40,000                             | \$ 40,000                                                     |
| 17                      | Cost Estimates                                                                                                            | 1        | LS    | \$ 14,000                             | \$ 14,000                                                     |
| 18                      | Technical Memorandum                                                                                                      | 1        | LS    | \$ 40,000                             | \$ 40,000                                                     |
| 19                      | Relevant permit analysis                                                                                                  | 1        | LS    | \$ 8,000                              | \$ 8,000                                                      |
|                         |                                                                                                                           |          |       |                                       | \$ -                                                          |
|                         |                                                                                                                           |          |       |                                       | \$ -                                                          |
|                         |                                                                                                                           |          |       | <b>SUBTOTAL COSTS IN 2026 DOLLARS</b> | \$ 272,000                                                    |
|                         |                                                                                                                           |          |       | <b>SUBTOTAL COSTS</b>                 | <b>\$ 272,000</b>                                             |



| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------|------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subtotal Construction Cost                                         |                  | \$ 704,540                                | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Mid-year Construction                                              | 2028             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Inflation                                                          | 2%               | 4%                                        | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | No construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        | No construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08% Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                    |                  |                                           | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Reference from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Outside Agency Construction                                        |                  | \$ -                                      | Provide comment if used. Addresses costs for utility relocation and affiliated coordination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Real Estate and Right-of-Way Costs                                 |                  | \$ -                                      | Includes purchases, permanent and temporary easements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Project Contingency                                                |                  | 5%                                        | Override to 5%. There is no construction involved with this work. 15% was used as a scope contingency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Risk Assessment Contingency                                        | 2.33             | 0%                                        | User input based on Risk Assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other                                                              |                  | \$ -                                      | Requires description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Preliminary and Alternative Design Evaluations                     | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Geotechnical Evaluation and Engineering                            | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Design Engineering                                                 | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Permitting and Licenses                                            | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Environmental Planning and Management                              | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Cultural Resource                                                  | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Community Relations                                                | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Real Estate Support                                                | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Legal Support                                                      | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Construction Management                                            | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

Date: 3/5/2026  
Project: Cosmopolis Mill Creek Mill Gate Study  
Prepared By: Xiating Chen (HDR)

|             |   |   |   |   |
|-------------|---|---|---|---|
| Likelihood  | H | 3 | 4 | 5 |
|             | M | 2 | 3 | 4 |
|             | L | 1 | 2 | 3 |
|             | L | M | H |   |
| Consequence |   |   |   |   |

| Category                           | Number | Risk, Threat, or Opportunity                            | Comments                                                                                           | Likelihood         | Consequence        | Risk Score | Strategy         | Risk Plan Proposed Mitigation                                            | Risk Cost Impact (\$)   | Risk Schedule Cost (Months)   | Risk Probability (%)           | Additional Contingency Cost (\$) | Additional Contingency X Impact (Months) |   |
|------------------------------------|--------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------|--------------------|------------|------------------|--------------------------------------------------------------------------|-------------------------|-------------------------------|--------------------------------|----------------------------------|------------------------------------------|---|
| Add lines as needed for categories |        | List potential risk from drop down menu or manual entry | Give specific comments and notes regarding the risk.                                               | Use drop down menu | Use drop down menu |            | Select from menu | Add description for proposed mitigation plan                             | Add potential risk cost | Add potential delay from risk | Add probability for occurrence | Calculated                       | Calculated                               |   |
| Project Management Risk            | 1      | Budget constraints or inflexibility                     | Project funding may be from grant sources with limited flexibility for additional modeling scopes. | Med                | Med                | 3          | Avoid            |                                                                          |                         |                               | 20%                            | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
| Project City Team Risk             |        | Staff turnover                                          | Schedule Delay, Changed Conditions                                                                 | Med                | Low                | 2          | Accept           |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
| Project Complexity Risk            |        | QA/QC Error or Omission                                 | Potential schedule and cost impacts.                                                               | Low                | Med                | 2          | Mitigate         | Implement QMP with QC reviews. Build time into the schedule for reviews. |                         |                               | 5%                             | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |
|                                    |        |                                                         |                                                                                                    |                    |                    | ---        |                  |                                                                          |                         |                               |                                | \$                               | -                                        | 0 |

Project Risk Assessment Score 2.33

When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added

## D.2 – Tide Gate Improvements

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## PROJECT SUMMARY SHEET

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-002                  |
| <b>PROJECT NAME</b>            | Mill Creek Tide Gate Improvements |
| <b>DATE</b>                    | 3/23/2026                         |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)                |
| <b>CC OR DISTRIBUTION LIST</b> | Click or tap here to enter text.  |

### PROJECT DESCRIPTION

Mill Creek flows to Chehalis River through the City of Cosmopolis, WA via six culverts between C Street and Altenau Street. The water level in Mill Creek is partly controlled by the tide gates located at the confluence of Mill Creek and Chehalis River to the north of Cosmopolis. Persistent flooding has been observed at these culverts. The Mill Creek tide gate study and design (COSI-SW-2026-001) will be conducted to document existing conditions and simulate mitigation scenarios to eliminate upstream inland flooding. A full design plan, specification and estimates (PS&E) will also be completed as a part of the preceding project.

With the design from the preceding tide gate study, this project will construct new tide gates on Mill Creek. FEMA-required CLOMR and LOMR documents would also be prepared as a part of this project.

See Figure 1 for project vicinity map, and Figure 2 for an overview of the existing tide gates.



Figure 1. Tide Gates Project Vicinity Map and Project Overview



Figure 2. Existing Tide Gates (Downstream side)



### PROJECT COST

Without the tide gate study complete, the scope of tide gate improvements is unknown at this time. For the purpose of cost estimating, the most expensive alternative from the Mill Creek Tide Gate Study and Design is presented as the cost of this Project, which assumes that the tide gates will be fully replaced and constructed.

The project cost has been estimated from a similarly scoped tide gate upgrade project performed by HDR in Grays Harbor County. The opinion of probable construction cost (OPCC) of conducting this tide gate improvement project will be around **\$4.2 million**. This project cost was developed in 2026 dollars, and a 2% inflation was applied for each year until the project's assumed start year of 2029.

See the attached estimate for breakout of construction costs.

### PROBLEM STATEMENT

Tide gates on Mill Creek stay open to a pre-determined elevation during incoming tides, then automatically close and stay closed during high tides or a flood event. While the upstream communities are protected from compound flooding during high tides events, the fixed elevation does not allow water to be discharged as quickly as possible from the creek during low tides. This may have caused water backup into Mill Creek's upstream basin, exacerbating flooding in an already under-sized system.

### PROJECT GOALS

From the PS&E developed in the Mill Creek tide gate study (COSI-SW-2026-001), new tide gates will be constructed.

### PROJECT SCOPE

1. Tide gate improvements construction
  - a. Site preparation
  - b. Site demolition
  - c. Tide gate installation
  - d. Electrical and controls
  - e. Site restoration
  - f. Other
2. CLOMR/LOMR
  - a. CLOMR
  - b. LOMR

### GEOTECHNICAL

Soils information for the project area was obtained from Natural Resources Conservation Service's (NRCS) online Web Soil Survey. Soils within the project area are primarily Mopang Silty Loam which is described as well or moderately well drained soils that formed in glaciofluvial sediments. A specific project geotechnical investigation is recommended early in the design process.

## UTILITIES

No utility conflicts anticipated with this project. Tide gates are located at confluence of Chehalis River and Mill Creek and no known utilities are shown from review of City provided as-builts. Utilities are unlikely to be in this area due to proximity to the coast and main lines being located more inland to service residential and business areas.

## ANTICIPATED MAJOR PERMITS

A detailed permit analysis would be prepared for the selected design in the preceding Mill Creek Tide Gate Study and Design project (COSI-SW-2026-001). These permits may include:

- State Environmental Policy Act (SEPA) review
- Hydraulic Project Approval from Washington Department of Fish and Wildlife
- Shoreline substantial development permit (SSDP)
- U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)
- Other local Grays Harbor County permit

## REAL ESTATE AND EASEMENT

Tide gate is located on parcel No.035504300000 owned by Weyerhaeuser NR Company and will need to be acquired or easements established for construction.

## STAKEHOLDERS

| STAKEHOLDERS                               |                                                |
|--------------------------------------------|------------------------------------------------|
| NAME                                       | INTEREST                                       |
| Cosmopolis residents along Mill Creek      | Reducing flooding risks                        |
| Army Corps of Engineers                    | Evaluating flood plain and dam control         |
| Washington Department of Ecology           | Floodplain restoration and stream bank erosion |
| Washington Department of Fish and Wildlife | Fish and wildlife protection                   |
| Weyerhaeuser NR Company                    | Owns property tide gates are located on        |
| Click or tap here to enter text.           | Click or tap here to enter text.               |
| Click or tap here to enter text.           | Click or tap here to enter text.               |

## ASSOCIATED PROJECTS

- COSI-SW-2026-001 Mill Creek Tide Gate Study and Design
- COSI-SW-2026-003 Lower Mill Creek Alenau St., H St., G St. and F St. Culvert Crossing Replacement
- COSI-SW-2026-004 Upper Mill Creek F St., E St. and C St. Culvert Crossing Replacement
- COSI-SW-2026-005 J St./4th St. Flooding and 2nd St. Outfall Improvements

## **ASSUMPTIONS, CONSTRAINTS, RISKS**

### **ASSUMPTIONS**

- Cost estimate and scope are based on tide gate replacement, project scope and estimate may change based on Mill Creek Tide Gate Study and Design project.

### **RISKS AND CONSTRAINTS**

#### **Project Management Risk**

- Project schedule constraints or timing of project execution may impact bottom line costs (i.e., fish window, etc.)
- Cultural resources may be encountered
- Multiple agency coordination could impact project schedule and cost
- Budget constraints or inflexibility due to grant funding.

#### **Project City Team Risk**

- Staff turnover could impact project schedule.

#### **Project Complexity Risk**

- QA/QC error or omission
- Regulatory changes, new regulations, and/or requirements
- Permitting challenges

### **OPPORTUNITIES**

N/A

### **EXCLUSIONS**

N/A

| Estimate - AACE Class 5                                                                               |                                                      |          |       |                              |                                                                                       |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------|-------|------------------------------|---------------------------------------------------------------------------------------|
|                                                                                                       |                                                      |          |       |                              | Xiating Chen (HDR)<br>Theo Malone (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Agency:                                                                                               | City of Cosmopolis                                   |          |       | Estimator(s):                |                                                                                       |
| Project Name:                                                                                         | Mill Creek Tide Gate Improvements                    |          |       | Date Prepared:               | 3/11/2026                                                                             |
| Location:                                                                                             | Mill Creek Upstream of the Chehalis River Confluence |          |       | Version:                     | 1                                                                                     |
| Description:                                                                                          | Mill Creek Tide Gate Improvements                    |          |       | Revision Date:               | N/A                                                                                   |
| DIRECT: SUBTOTAL CONSTRUCTION COSTS                                                                   |                                                      |          |       |                              |                                                                                       |
| Item No.                                                                                              | Item Description                                     | Quantity | Units | Unit Cost                    | Item Cost                                                                             |
| 1                                                                                                     | Tide Gate Improvements Cost                          | 1        | LS    | \$ 2,124,000.00              | \$ 2,124,000                                                                          |
|                                                                                                       |                                                      |          |       |                              | \$                                                                                    |
|                                                                                                       |                                                      |          |       |                              | \$                                                                                    |
|                                                                                                       |                                                      |          |       |                              | \$                                                                                    |
|                                                                                                       |                                                      |          |       |                              | \$                                                                                    |
|                                                                                                       |                                                      |          |       |                              | \$                                                                                    |
| Subtotal Construction Cost                                                                            |                                                      |          |       |                              | \$ 2,124,000                                                                          |
| Allowance For Indeterminates (AFI)                                                                    |                                                      |          |       |                              | \$                                                                                    |
| Permits for Construction                                                                              |                                                      |          |       |                              | \$                                                                                    |
| ESTIMATED PROBABLE COST OF CONSTRUCTION BID                                                           |                                                      |          |       |                              | \$ 2,124,000                                                                          |
| DIRECT: SUBTOTAL ADDITIONAL CONSTRUCTION COSTS                                                        |                                                      |          |       |                              |                                                                                       |
| Construction Change Order Allowance                                                                   |                                                      |          |       | \$                           | 212,400                                                                               |
| Material Pricing Uncertainty Allowance                                                                |                                                      |          |       | \$                           |                                                                                       |
| Construction Sales Tax                                                                                |                                                      |          |       | \$                           | 207,940                                                                               |
| Outside Agency Construction                                                                           |                                                      |          |       | \$                           |                                                                                       |
| Subtotal Additional Construction Costs                                                                |                                                      |          |       | \$                           | 420,340                                                                               |
| TOTAL DIRECT CONSTRUCTION COSTS                                                                       |                                                      |          |       | \$                           | 2,544,340                                                                             |
| INDIRECT: NON-CONSTRUCTION COSTS                                                                      |                                                      |          |       |                              |                                                                                       |
| Preliminary, Geotechnical, and Design Engineering                                                     |                                                      |          |       | Included on COSI-SW-2026-001 |                                                                                       |
| Environmental Planning, Management, Permitting & Licenses, Cultural Resource, and Community Relations |                                                      |          |       | \$                           | 228,991                                                                               |
| Real Estate, Easements, and ROW Costs                                                                 |                                                      |          |       | \$                           |                                                                                       |
| Legal Support                                                                                         |                                                      |          |       | \$                           | 1,272                                                                                 |
| Construction Management                                                                               |                                                      |          |       | \$                           | 203,547                                                                               |
| Other                                                                                                 |                                                      |          |       | \$                           | 50,000                                                                                |
| TOTAL INDIRECT NON-CONSTRUCTION COSTS                                                                 |                                                      |          |       | \$                           | 483,810                                                                               |
| Contingency (Includes Risk Assessment Contingency)                                                    |                                                      |          |       | \$                           | 908,400                                                                               |
| TOTAL PROJECT COST (YEAR 2026)                                                                        |                                                      |          |       | \$                           | 3,936,600                                                                             |
| Inflation to Mid-year Construction                                                                    |                                                      |          |       | \$                           | 236,196                                                                               |
| ADJUSTED TOTAL PROJECT COST (YEAR 2029)                                                               |                                                      |          |       | \$                           | 4,172,800                                                                             |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2029                  |

| Estimate - AACE Class 5                                         |                                                      |                       |                                                                                       |              |                  |
|-----------------------------------------------------------------|------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|--------------|------------------|
| <b>Agency:</b>                                                  | City of Cosmopolis                                   | <b>Estimator(s):</b>  | Xiating Chen (HDR)<br>Theo Malone (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |              |                  |
| <b>Project Name:</b>                                            | Mill Creek Tide Gate Improvements                    | <b>Date Prepared:</b> | 3/11/2026                                                                             |              |                  |
| <b>Location:</b>                                                | Mill Creek Upstream of the Chehalis River Confluence | <b>Version:</b>       | 1                                                                                     |              |                  |
| <b>Description:</b>                                             | Mill Creek Tide Gate Improvements                    | <b>Revision Date:</b> | N/A                                                                                   |              |                  |
| Item No.                                                        | Item Description                                     | Quantity              | Units                                                                                 | Unit Cost    | Item Cost        |
|                                                                 | <b>Site Preparation</b>                              |                       |                                                                                       |              | \$ -             |
|                                                                 | Construction Survey and Staking Allowance            | 1                     | LS                                                                                    | \$ 10,000    | \$ 10,000        |
|                                                                 | In-Water Work Isolation and Stream Bypass Allowance  | 1                     | LS                                                                                    | \$ 580,000   | \$ 580,000       |
|                                                                 | Fish Passage/Protection Measures Allowance           | 1                     | LS                                                                                    | \$ 100,000   | \$ 100,000       |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
|                                                                 | <b>Site Demolition</b>                               |                       |                                                                                       |              | \$ -             |
|                                                                 | Demolition Existing Tide Gate Allowance              | 2                     | EA                                                                                    | \$ 100,000   | \$ 200,000       |
|                                                                 | Remove Existing Riprap                               | 444                   | CY                                                                                    | \$ 50        | \$ 22,222        |
|                                                                 | Clearing and Grubbing                                | 667                   | SY                                                                                    | \$ 16        | \$ 10,667        |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
|                                                                 | <b>Tide Gate Installation</b>                        |                       |                                                                                       |              | \$ -             |
|                                                                 | Structure Width                                      | 20                    | FT                                                                                    |              | \$ -             |
|                                                                 | Structure Length                                     | 70                    | FT                                                                                    |              | \$ -             |
|                                                                 | Excavation including haul                            | 311                   | CY                                                                                    | \$ 67        | \$ 20,844        |
|                                                                 | Aggregate base                                       | 18                    | CY                                                                                    | \$ 45        | \$ 800           |
|                                                                 | Woven geotextile                                     | 160                   | SY                                                                                    | \$ 10        | \$ 1,600         |
|                                                                 | Structural concrete box culvert incl. windwalls      | 1                     | LS                                                                                    | \$ 130,000   | \$ 130,000       |
|                                                                 | Adjustable tidal gates incl. controls                | 1                     | LS                                                                                    | \$ 500,000   | \$ 500,000       |
|                                                                 | Structure backfill                                   | 100                   | CY                                                                                    | \$ 55        | \$ 5,500         |
|                                                                 | Class 200 riprap                                     | 200                   | CY                                                                                    | \$ 140       | \$ 28,000        |
|                                                                 |                                                      |                       |                                                                                       |              |                  |
|                                                                 | <b>Electrical and Controls</b>                       | 1                     | LS                                                                                    | \$ 200,000   | \$ 200,000       |
|                                                                 | <i>Electrical Service Distribution Allowance</i>     |                       |                                                                                       |              | \$ -             |
|                                                                 | <i>Distribution Panel and Connections</i>            |                       |                                                                                       |              | \$ -             |
|                                                                 | <i>Instrumentation and Controls</i>                  |                       |                                                                                       |              | \$ -             |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
|                                                                 | <b>Site Restoration</b>                              |                       |                                                                                       |              | \$ -             |
|                                                                 | Site Cleanup                                         | 1                     | LS                                                                                    | \$ 15,000    | \$ 15,000        |
|                                                                 | Planting and Seeding                                 | 667                   | SY                                                                                    | \$ 30        | \$ 20,000        |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
|                                                                 | <b>TESC Allowance (@ 4%)</b>                         | 4%                    | LS                                                                                    | \$ 1,844,633 | \$ 73,785        |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
|                                                                 |                                                      |                       |                                                                                       |              | \$ -             |
| <b>Cost Subtotal</b>                                            |                                                      |                       |                                                                                       |              | \$ 1,918,419     |
| DIRECT: CONSTRUCTION COST MARK-UPS                              |                                                      |                       |                                                                                       |              |                  |
|                                                                 | General Conditions                                   | 0%                    | 1                                                                                     | \$           | -                |
|                                                                 | Mobilization/Demobilization                          | 8%                    | 1.08                                                                                  | \$           | 153,473          |
|                                                                 | Overhead & Profit (OHP)                              | 0%                    | 1                                                                                     | \$           | -                |
|                                                                 | Insurance                                            | 1.5%                  | 1.015                                                                                 | \$           | 31,078           |
|                                                                 | Bonding                                              | 1.0%                  | 1.01                                                                                  | \$           | 21,030           |
| <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> |                                                      |                       |                                                                                       | \$           | 2,124,000        |
|                                                                 | Escalation Multiplier from ENR-CCI                   | 0%                    | 0.0000                                                                                | \$           | -                |
| <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              |                                                      |                       |                                                                                       | \$           | 2,124,000        |
| <b>SUBTOTAL CONSTRUCTION COSTS</b>                              |                                                      |                       |                                                                                       | \$           | <b>2,124,000</b> |

| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------|------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Subtotal Construction Cost                                         |                  | \$ 2,124,000                              | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Mid-year Construction                                              | 2029             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Inflation                                                          | 2%               | 6%                                        | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        | Provide a comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | Incorporated in indirect project costs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08%<br>Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Reference from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Outside Agency Construction                                        |                  | \$ -                                      | Provide comment if used. Addresses costs for utility relocation and affiliated coordination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Real Estate and Right-of-Way Costs                                 |                  | \$ -                                      | Includes purchases, permanent and temporary easements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Project Contingency                                                |                  | 30%                                       | Requires comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Risk Assessment Contingency                                        | 2.75             | 0%                                        | User input based on Risk Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Other                                                              |                  | \$ 50,000                                 | Requires CLOMR/LOMR from Army Corp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Preliminary and Alternative Design Evaluations                     | Routine          | 4.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Geotechnical Evaluation and Engineering                            | Routine          | 3.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Design Engineering                                                 | Routine          | 10.0%                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Permitting and Licenses                                            | High             | 3.0%                                      | May need to coordinate with Ecology, Army Corp, WDFW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Environmental Planning and Management                              | Moderate         | 5.0%                                      | Work in Mill Ck. stream channel (salmon bearing) and associated permitting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Cultural Resource                                                  | Routine          | 0.8%                                      | Per DAHP WISSARD there is a high probability of encountering cultural resources. However, set to routine since work will be within the existing tide gate footprint.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Community Relations                                                | Low              | 0.2%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Real Estate Support                                                | N/A              | 0.0%                                      | Easements not anticipated on this project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Legal Support                                                      | Low              | 0.1%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Construction Management                                            | Routine          | 8.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Date:  
Project:  
Prepared By:

|             |   |   |   |   |
|-------------|---|---|---|---|
| Likelihood  | H | 3 | 4 | 5 |
|             | M | 2 | 3 | 4 |
|             | L | 1 | 2 | 3 |
|             |   | L | M | H |
| Consequence |   |   |   |   |

| Category                           | Number | Risk, Threat, or Opportunity                                                                                        | Comments                                                                                                                                                                                               | Likelihood         | Consequence        | Risk Score | Strategy         | Risk Plan Proposed Mitigation                                                                                                                                                                                                                           |
|------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Add lines as needed for categories |        | List potential risk from drop down menu or manual entry                                                             | Give specific comments and notes regarding the risk.                                                                                                                                                   | Use drop down menu | Use drop down menu |            | Select from menu | Add description for proposed mitigation plan                                                                                                                                                                                                            |
| Project Management Risk            |        | Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish 1 window, etc.) | Mill Creek is salmon bearing. Set project schedule so outfall construction occurs within the fish window.                                                                                              | Med                | Med                | 3          | Mitigate         | Consider a design that keeps the existing storm line in service for as long as possible and install new storm pipe as separate dry pipe line, if feasible. This may reduce TESC costs and minimize construction constraints.                            |
|                                    |        | Cultural resources may be encountered                                                                               | Cosmopolis is in an area listed as high probability for encountering cultural resources on DAHP WISSARD                                                                                                | Med                | Med                | 3          | Mitigate         | Obtain a cultural resource assessment near and at the outfall area during design. Consider setting new pipe alignment within the existing roadway to reduce the likelihood of encountering cultural resources during construction stage.                |
|                                    |        | Multiple agency coordination could impact project schedule and cost                                                 | Work on the tide gate will require Ecology, WDFW, USACE, and potentially Tribal, coordination. Project funding may be from grant sources with limited flexibility for design and construction changes. | High               | Low                | 3          | Mitigate         | Identify agencies involved and initiate the permitting process early in design development. Set project design schedule to accommodate coordination and permitting in advance. Additional cost for coordination was added to the indirect input values. |
|                                    |        | Budget constraints or inflexibility                                                                                 |                                                                                                                                                                                                        | Med                | High               | 4          | Avoid            |                                                                                                                                                                                                                                                         |
| Project City Team Risk             |        | Staff turnover                                                                                                      | Schedule Delay, Changed Conditions                                                                                                                                                                     | Med                | Low                | 2          | Accept           |                                                                                                                                                                                                                                                         |
|                                    |        |                                                                                                                     |                                                                                                                                                                                                        |                    |                    |            |                  |                                                                                                                                                                                                                                                         |
|                                    |        |                                                                                                                     |                                                                                                                                                                                                        |                    |                    |            |                  |                                                                                                                                                                                                                                                         |
|                                    |        |                                                                                                                     |                                                                                                                                                                                                        |                    |                    |            |                  |                                                                                                                                                                                                                                                         |
| Project Complexity Risk            |        | QA/QC Error or Omission                                                                                             | Potential schedule and cost impacts.                                                                                                                                                                   | Low                | Med                | 2          | Mitigate         | Implement QMP with QC reviews. Build time into the schedule for reviews.                                                                                                                                                                                |
|                                    |        | Regulatory changes, new regulations, and/or requirements                                                            | There may be storm or 404 permitting changes and new regulations implemented for work at Mill Creek.                                                                                                   | Low                | Med                | 2          | Mitigate         | Initiate the permitting process early in design development.                                                                                                                                                                                            |
|                                    |        | Permitting challenges                                                                                               | Work on the Mill Creek will require Ecology, WDFW, USACE, and potentially Tribal, coordination.                                                                                                        | High               | Low                | 3          | Accept           | Initiate permitting process early in the design phase to identify potential requirements.                                                                                                                                                               |

Project Risk Assessment Score

2.75 When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added

## D.3 – Lower Mill Creek Culvert Replacement



## PROJECT SUMMARY SHEET

|                                |                                       |
|--------------------------------|---------------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-003                      |
| <b>PROJECT NAME</b>            | Lower Mill Creek Culvert Replacements |
| <b>DATE</b>                    | 3/23/2026                             |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)                    |
| <b>CC OR DISTRIBUTION LIST</b> | Click or tap here to enter text.      |

### PROJECT DESCRIPTION

Mill Creek flows to Chehalis River through the City of Cosmopolis, WA via six culverts between C Street and Altenau Street. The water level in Mill Creek is partly controlled by the tide gates at the confluence of Mill Creek and the Chehalis River to the north of Cosmopolis. Persistent flooding has been observed at these culverts.

This project will provide design plans, specifications, and estimates (PS&E) for replacement of three of the downstream culverts including G St, H St, and Altenau St culverts.

See Figure 1 for project vicinity map.



Figure 1. Tide Gates Project Vicinity Map and Project Overview



### PROJECT COST

The opinion of probable construction cost (OPCC) of replacing the three culverts will be approximately **\$9 million**. This project cost was developed in 2026 dollars, with a 2% inflation applied for each year until the project's assumed start year of 2030.

See the attached estimate for breakdown of costs.

### PROBLEM STATEMENT

Mill Creek culverts are undersized and contribute to persistent flooding of the residential areas surrounding Mill Creek. All six culverts along Mill Creek are undersized, the culvert crossings will be replaced downstream first and proceed upstream. This will reduce the likelihood that replacement may increase flooding due to backwater from a downstream culvert constriction.

### PROJECT GOALS

Replace G Street, H Street, and Altenau Street culverts with three-sided box culverts that improve hydraulic efficiency and fish passage.

### PROJECT SCOPE

1. Design 20%-100%
  - a. PS&E (3 culverts)
  - b. H&H modeling update allowance
  - c. Permitting Analysis
2. Culvert construction costs
3. Design Report
  - a. Design documentation
  - b. H&H modeling results
  - c. Geotechnical services
  - d. Permitting summary
  - e. O&M recommendations

### GEOTECHNICAL

Soils information for the project area was obtained from Natural Resources Conservation Service's (NRCS) online Web Soil Survey. Soils within the Mill Creek culvert crossing area are primarily Mopang Silty Loam, which is described as deep to cemented till soils, well or moderately well drained soils that formed in glaciofluvial sediments. While soils within the area have the potential to be well drained, due to the proximity to Mill Creek, the estimates prepared for this report assume that soils will be saturated and unsuitable for re-use. A specific project geotechnical investigation is recommended early in the design process.

### UTILITIES

Water, sewer, overhead power and communication lines are within the project area according to City as-built information. Water mains and overhead utilities are anticipated to be relocated for all three culvert replacements. H St culvert replacement is located near a sewer lift pump station and

relocation may be required. Survey is needed to confirm location and determine depth and size of utilities.

### ANTICIPATED MAJOR PERMITS

State Environmental Policy Act (SEPA) review  
Hydraulic Project Approval from Washington Department of Fish and Wildlife  
Shoreline substantial development permit (SSDP)  
U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)  
Other local Grays Harbor County permits

### REAL ESTATE AND EASEMENT

Culverts are located within City ROW but construction work may encroach into neighboring residential parcels that will require temporary construction easements.

### STAKEHOLDERS

| STAKEHOLDERS                               |                                                                                                           |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| NAME                                       | INTEREST                                                                                                  |
| Cosmopolis residents along Mill Creek      | Reducing flooding risks, traffic impacts, construction duration, noise, dust, access to private property. |
| Army Corps of Engineers                    | Evaluating flood plain and dam control                                                                    |
| Washington Department of Ecology           | Floodplain restoration and stream bank erosion                                                            |
| Washington Department of Fish and Wildlife | Fish passage and wildlife protection                                                                      |
| City of Cosmopolis O&M                     | Access and maintenance of facilities                                                                      |
| Utility customers                          | Service interruptions                                                                                     |
| Click or tap here to enter text.           | Click or tap here to enter text.                                                                          |
| Click or tap here to enter text.           | Click or tap here to enter text.                                                                          |

### ASSOCIATED PROJECTS

- COSI-SW-2026-002 Mill Creek Tide Gate Improvements
- COSI-SW-2026-004 Upper Mill Creek F St., E St. and C St. Culvert Crossing Replacement
- COSI-SW-2026-005 J St./4th St. Flooding and 2nd St. Outfall Improvements

## ASSUMPTIONS, CONSTRAINTS, RISKS

### ASSUMPTIONS

- No contaminated soils handling or disposal needed.
- Soils will be unsuitable for reuse.
- 20 feet of upstream and downstream of culverts will require channel improvements.
- Work will be sequenced to minimize process, service, and community interruptions.
- There will be utility relocations for water, sewer, storm, overhead power, and overhead communications. Extent of work is unknown at this time.

- Project construction will be seasonally restricted due to presence of fish in the stream.

## **RISKS AND CONSTRAINTS**

### **Project Management Risk**

- Project schedule constraints or timing of project execution may impact bottom line costs (i.e., fish window, etc.)
- Cultural resources may be encountered
- Multiple agency coordination could impact project schedule and cost
- Budget constraints or inflexibility due to grant funding.

### **Project City Team Risk**

- Staff turnover could impact project schedule.

### **Project Complexity Risk**

- QA/QC error or omission
- Regulatory changes, new regulations, and/or requirements
- Permitting challenges

## **OPPORTUNITIES**

N/A

## **EXCLUSIONS**

N/A

| Estimate - AACE Class 5                                                                               |                                            |          |       |                |                                                                  |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------|----------|-------|----------------|------------------------------------------------------------------|
|                                                                                                       |                                            |          |       |                | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Agency:                                                                                               | City of Cosmopolis                         |          |       | Estimator(s):  |                                                                  |
| Project Name:                                                                                         | Lower Mill Creek Culvert Replacements      |          |       | Date Prepared: | 3/13/2026                                                        |
| Location:                                                                                             | Mill Creek from G Street to Altenau Street |          |       | Version:       | 1                                                                |
| Description:                                                                                          | Lower Mill Creek Culvert Replacements      |          |       | Revision Date: | N/A                                                              |
| DIRECT: SUBTOTAL CONSTRUCTION COSTS                                                                   |                                            |          |       |                |                                                                  |
| Item No.                                                                                              | Item Description                           | Quantity | Units | Unit Cost      | Item Cost                                                        |
| 1                                                                                                     | G Street Culvert Replacement               | 1        | LS    | \$ 1,405,400   | \$ 1,405,400                                                     |
| 2                                                                                                     | H Street Culvert Replacement               | 1        | LS    | \$ 1,281,600   | \$ 1,281,600                                                     |
| 3                                                                                                     | Altenau Street Culvert Replacement         | 1        | LS    | \$ 1,367,000   | \$ 1,367,000                                                     |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
| Subtotal Construction Cost                                                                            |                                            |          |       |                | \$ 4,054,000                                                     |
| Allowance For Indeterminates (AFI)                                                                    |                                            |          |       |                | \$ -                                                             |
| Permits for Construction                                                                              |                                            |          |       |                | \$ -                                                             |
| ESTIMATED PROBABLE COST OF CONSTRUCTION BID                                                           |                                            |          |       |                | \$ 4,054,000                                                     |
| DIRECT: SUBTOTAL ADDITIONAL CONSTRUCTION COSTS                                                        |                                            |          |       |                |                                                                  |
| Construction Change Order Allowance                                                                   |                                            |          |       |                | \$ 405,400                                                       |
| Material Pricing Uncertainty Allowance                                                                |                                            |          |       |                | \$ -                                                             |
| Construction Sales Tax                                                                                |                                            |          |       |                | \$ 396,887                                                       |
| Outside Agency Construction                                                                           |                                            |          |       |                | \$ 5,000                                                         |
| Subtotal Additional Construction Costs                                                                |                                            |          |       |                | \$ 807,287                                                       |
| TOTAL DIRECT CONSTRUCTION COSTS                                                                       |                                            |          |       |                | \$ 4,861,290                                                     |
| INDIRECT: NON-CONSTRUCTION COSTS                                                                      |                                            |          |       |                |                                                                  |
| Preliminary, Geotechnical, and Design Engineering                                                     |                                            |          |       |                | \$ 729,194                                                       |
| Environmental Planning, Management, Permitting & Licenses, Cultural Resource, and Community Relations |                                            |          |       |                | \$ 408,348                                                       |
| Real Estate, Easements, and ROW Costs                                                                 |                                            |          |       |                | \$ 18,884                                                        |
| Legal Support                                                                                         |                                            |          |       |                | \$ 2,431                                                         |
| Construction Management                                                                               |                                            |          |       |                | \$ 388,903                                                       |
| Other                                                                                                 |                                            |          |       |                | \$ -                                                             |
| TOTAL INDIRECT NON-CONSTRUCTION COSTS                                                                 |                                            |          |       |                | \$ 1,547,760                                                     |
| Contingency (Includes Risk Assessment Contingency)                                                    |                                            |          |       |                | \$ 1,922,700                                                     |
| TOTAL PROJECT COST (YEAR 2026)                                                                        |                                            |          |       |                | \$ 8,331,800                                                     |
| Inflation to Mid-year Construction                                                                    |                                            |          |       |                | \$ 666,544                                                       |
| ADJUSTED TOTAL PROJECT COST (YEAR 2030)                                                               |                                            |          |       |                | \$ 8,998,300                                                     |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2030                  |

| Estimate - AACE Class 5                                         |                                                                |          |        |                |                                                                  |
|-----------------------------------------------------------------|----------------------------------------------------------------|----------|--------|----------------|------------------------------------------------------------------|
| Agency:                                                         | City of Cosmopolis                                             |          |        | Estimator(s):  | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Project Name:                                                   | Lower Mill Creek Culvert Replacements                          |          |        | Date Prepared: | 3/13/2026                                                        |
| Location:                                                       | Mill Creek from G Street to Altenau Street                     |          |        | Version:       | 1                                                                |
| Description:                                                    | G Street Culvert Replacement                                   |          |        | Revision Date: | N/A                                                              |
| Item No.                                                        | Item Description                                               | Quantity | Units  | Unit Cost      | Item Cost                                                        |
| 1                                                               | <b>Demolition &amp; Removal</b>                                |          |        |                | \$ -                                                             |
| 2                                                               | Remove existing pipe culvert                                   | 192      | LF     | \$ 65          | \$ 12,480                                                        |
| 3                                                               | Remove Structure and Obstruction Allowance                     | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 4                                                               | Remove existing asphalt pavement                               | 113      | SY     | \$ 28          | \$ 3,173                                                         |
| 5                                                               | Remove existing curb and gutter                                | 68       | LF     | \$ 15          | \$ 1,020                                                         |
| 6                                                               | Remove cement concrete sidewalk                                | 38       | SY     | \$ 28          | \$ 1,058                                                         |
| 7                                                               | Clearing and grubbing                                          | 400      | SF     | \$ 10          | \$ 4,000                                                         |
| 8                                                               | EX Headwall Demo                                               |          |        |                | \$ -                                                             |
| 9                                                               |                                                                |          |        |                | \$ -                                                             |
| 10                                                              | <b>Excavation &amp; Shoring</b>                                |          |        |                | \$ -                                                             |
| 11                                                              | Roadway existing elevation                                     | 16.5     | FT     |                | \$ -                                                             |
| 12                                                              | Culvert existing IE                                            | 9.3      | FT     |                | \$ -                                                             |
| 13                                                              | Excavation work area on each side                              | 5        | FT     |                | \$ -                                                             |
| 14                                                              | Excavation length                                              | 106      | FT     |                | \$ -                                                             |
| 15                                                              | Excavation width                                               | 34       | FT     |                | \$ -                                                             |
| 16                                                              | Excavation depth                                               | 8        | FT     |                | \$ -                                                             |
| 17                                                              | Structure excavation, incl haul & disposal                     | 952      | CY     | \$ 67          | \$ 63,801                                                        |
| 18                                                              | Structural Backfill                                            | 836      | CY     | \$ 68          | \$ 56,840                                                        |
| 19                                                              | Temporary Shoring                                              | 1,734    | SF     | \$ 120         | \$ 208,099                                                       |
| 20                                                              |                                                                |          |        |                | \$ -                                                             |
| 21                                                              | <b>Dewatering &amp; Stream Bypass</b>                          |          |        |                | \$ -                                                             |
| 22                                                              | Temporary Stream Bypass Allowance                              | 1        | LS     | \$ 75,000      | \$ 75,000                                                        |
| 23                                                              | Dewatering Allowance                                           | 1        | LS     | \$ 50,000      | \$ 50,000                                                        |
| 24                                                              |                                                                |          |        |                | \$ -                                                             |
| 25                                                              | <b>Culvert Replacement &amp; Stream Restoration</b>            |          |        |                | \$ -                                                             |
| 26                                                              | Interior width                                                 | 10       | FT     |                | \$ -                                                             |
| 27                                                              | Interior height                                                | 5        | FT     |                | \$ -                                                             |
| 28                                                              | Length                                                         | 96       | FT     |                | \$ -                                                             |
| 29                                                              | Wall thickness                                                 | 1        | FT     |                | \$ -                                                             |
| 30                                                              | Footing length                                                 | 6        | FT     |                | \$ -                                                             |
| 31                                                              | Length of Stream improvements ( 20' upstream & 20' downstream) | 20       | FT     |                | \$ -                                                             |
| 32                                                              | Stream width Avg.                                              | 20       | FT     |                | \$ -                                                             |
| 33                                                              | Precast 3-sided concrete box culvert, incl. wingwalls          | 96       | LF     | \$ 3,400       | \$ 326,400                                                       |
| 34                                                              | Culvert Headwall, 2' H                                         | 1        | CY     | \$ 1,400       | \$ 1,037                                                         |
| 35                                                              | Culvert Footings, 6' W                                         | 96       | LF     | \$ 1,500       | \$ 144,000                                                       |
| 36                                                              | Crushed aggregate base                                         | 43       | CY     | \$ 98          | \$ 4,181                                                         |
| 37                                                              | Streambed cobbles & sediment                                   | 265      | TON    | \$ 110         | \$ 29,172                                                        |
| 38                                                              | Stream Restoration & bank stabilization                        | 3,400    | SF     | \$ 45          | \$ 153,000                                                       |
| 39                                                              | Landscape & Restoration Allowance                              | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 40                                                              |                                                                |          |        |                | \$ -                                                             |
| 41                                                              | <b>Utility Relocations</b>                                     |          |        |                | \$ -                                                             |
| 42                                                              | Water main relocation                                          | 30       | LF     | \$ 275         | \$ 8,250                                                         |
| 43                                                              | Overhead power & Comm relocation                               | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 44                                                              | Unknown Utility Relocations Allowance                          | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 45                                                              |                                                                |          |        |                | \$ -                                                             |
| 46                                                              | <b>Roadway Restoration</b>                                     |          |        |                | \$ -                                                             |
| 47                                                              | Length of roadway improvements                                 | 34       | FT     |                | \$ -                                                             |
| 48                                                              | Roadway width                                                  | 30       | FT     |                | \$ -                                                             |
| 49                                                              | Base Thickness                                                 | 0.5      | FT     |                | \$ -                                                             |
| 50                                                              | HMA Thickness                                                  | 0.2      | FT     |                | \$ -                                                             |
| 51                                                              | Planter Strip Width                                            | 6.0      | FT     |                | \$ -                                                             |
| 52                                                              | Crushed Aggregate Base                                         | 35       | TN     | \$ 95          | \$ 3,320                                                         |
| 53                                                              | Roadway Restoration HMA                                        | 15       | TN     | \$ 310         | \$ 4,802                                                         |
| 54                                                              | Sidewalk Restoration, 5' wide                                  | 38       | SY     | \$ 110         | \$ 4,156                                                         |
| 55                                                              | Curb and Gutter                                                | 68       | LF     | \$ 72          | \$ 4,896                                                         |
| 56                                                              | Handrails                                                      | 40       | LF     | \$ 320         | \$ 12,800                                                        |
| 57                                                              | Landscaping                                                    | 45       | SY     | \$ 68          | \$ 3,083                                                         |
| 58                                                              |                                                                |          |        |                | \$ -                                                             |
| 59                                                              | <b>Traffic Control, TESC, Misc.</b>                            |          |        |                | \$ -                                                             |
| 60                                                              | Traffic Control                                                | 1        | LS     | \$ 6,000       | \$ 6,000                                                         |
| 61                                                              | TESC @ 4% of Construction                                      | 4%       | LS     | \$ 1,220,567   | \$ 48,823                                                        |
|                                                                 |                                                                |          |        |                | \$ -                                                             |
|                                                                 |                                                                |          |        |                | \$ -                                                             |
|                                                                 |                                                                |          |        | Cost Subtotal  | \$ 1,269,389                                                     |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b>                       |                                                                |          |        |                |                                                                  |
|                                                                 | General Conditions                                             | 0%       | 1      | \$             | -                                                                |
|                                                                 | Mobilization/Demobilization                                    | 8%       | 1.08   | \$             | 101,551                                                          |
|                                                                 | Overhead & Profit (OHP)                                        | 0%       | 1      | \$             | -                                                                |
|                                                                 | Insurance                                                      | 1.5%     | 1.015  | \$             | 20,564                                                           |
|                                                                 | Bonding                                                        | 1.0%     | 1.01   | \$             | 13,915                                                           |
| <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> |                                                                |          |        |                | \$ 1,405,420                                                     |
|                                                                 | Escalation Multiplier from ENR-CCI                             | 0%       | 1.0000 | \$             | -                                                                |
| <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              |                                                                |          |        |                | \$ 1,405,420                                                     |
| <b>SUBTOTAL CONSTRUCTION COSTS</b>                              |                                                                |          |        |                | \$ 1,405,400                                                     |

| Estimate - AACE Class 5                                         |                                                                |          |        |                |                                                                  |
|-----------------------------------------------------------------|----------------------------------------------------------------|----------|--------|----------------|------------------------------------------------------------------|
| Agency:                                                         | City of Cosmopolis                                             |          |        | Estimator(s):  | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Project Name:                                                   | Lower Mill Creek Culvert Replacements                          |          |        | Date Prepared: | 3/13/2026                                                        |
| Location:                                                       | Mill Creek from G Street to Altenau Street                     |          |        | Version:       | 1                                                                |
| Description:                                                    | H Street Culvert Replacement                                   |          |        | Revision Date: | N/A                                                              |
| Item No.                                                        | Item Description                                               | Quantity | Units  | Unit Cost      | Item Cost                                                        |
| 1                                                               | <b>Demolition &amp; Removal</b>                                |          |        |                | \$ -                                                             |
| 2                                                               | Remove existing pipe culvert                                   | 162      | LF     | \$ 65          | \$ 10,530                                                        |
| 3                                                               | Remove Structure and Obstruction Allowance                     | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 4                                                               | Remove existing asphalt pavement                               | 113      | SY     | \$ 28          | \$ 3,173                                                         |
| 5                                                               | Remove existing curb and gutter                                | 68       | LF     | \$ 15          | \$ 1,020                                                         |
| 6                                                               | Remove cement concrete sidewalk & driveway                     | 121      | SY     | \$ 28          | \$ 3,391                                                         |
| 7                                                               | Clearing and grubbing                                          | 400      | SF     | \$ 10          | \$ 4,000                                                         |
| 8                                                               |                                                                |          |        |                | \$ -                                                             |
| 9                                                               | <b>Excavation &amp; Shoring</b>                                |          |        |                | \$ -                                                             |
| 10                                                              | Roadway existing elevation                                     | 13.8     | FT     |                | \$ -                                                             |
| 11                                                              | Culvert existing IE                                            | 6.5      | FT     |                | \$ -                                                             |
| 12                                                              | Excavation work area on each side                              | 5        | FT     |                | \$ -                                                             |
| 13                                                              | Excavation length                                              | 91       | FT     |                | \$ -                                                             |
| 14                                                              | Excavation width                                               | 34       | FT     |                | \$ -                                                             |
| 15                                                              | Excavation depth                                               | 8        | FT     |                | \$ -                                                             |
| 16                                                              | Structure excavation, incl haul & disposal                     | 834      | CY     | \$ 67          | \$ 55,908                                                        |
| 17                                                              | Structural Backfill                                            | 736      | CY     | \$ 68          | \$ 50,066                                                        |
| 18                                                              | Temporary Shoring                                              | 1,512    | SF     | \$ 120         | \$ 181,490                                                       |
| 19                                                              |                                                                |          |        |                | \$ -                                                             |
| 20                                                              | <b>Dewatering &amp; Stream Bypass</b>                          |          |        |                | \$ -                                                             |
| 21                                                              | Temporary Stream Bypass Allowance                              | 1        | LS     | \$ 75,000      | \$ 75,000                                                        |
| 22                                                              | Dewatering Allowance                                           | 1        | LS     | \$ 50,000      | \$ 50,000                                                        |
| 23                                                              |                                                                |          |        |                | \$ -                                                             |
| 24                                                              | <b>Culvert Replacement &amp; Stream Restoration</b>            |          |        |                | \$ -                                                             |
| 25                                                              | Interior width                                                 | 10       | FT     |                | \$ -                                                             |
| 26                                                              | Interior height                                                | 5        | FT     |                | \$ -                                                             |
| 27                                                              | Length                                                         | 81       | FT     |                | \$ -                                                             |
| 28                                                              | Wall thickness                                                 | 1        | FT     |                | \$ -                                                             |
| 29                                                              | Footing length                                                 | 6        | FT     |                | \$ -                                                             |
| 30                                                              | Length of Stream improvements ( 20' upstream & 20' downstream) | 20       | FT     |                | \$ -                                                             |
| 31                                                              | Stream width Avg.                                              | 20       | FT     |                | \$ -                                                             |
| 32                                                              | Precast 3-sided concrete box culvert, incl. wingwalls          | 81       | LF     | \$ 3,400       | \$ 275,400                                                       |
| 33                                                              | Culvert Headwall, 2' H                                         | 1        | CY     | \$ 1,400       | \$ 1,037                                                         |
| 34                                                              | Culvert Footings, 6' W                                         | 81       | LF     | \$ 1,500       | \$ 121,500                                                       |
| 35                                                              | Crushed aggregate base                                         | 36       | CY     | \$ 98          | \$ 3,528                                                         |
| 36                                                              | Streambed cobbles & sediment                                   | 236      | TON    | \$ 110         | \$ 25,955                                                        |
| 37                                                              | Stream Restoration & bank stabilization                        | 3,025    | SF     | \$ 45          | \$ 136,125                                                       |
| 38                                                              | Landscape & Restoration Allowance                              | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 39                                                              |                                                                |          |        |                | \$ -                                                             |
| 40                                                              | <b>Utility Relocations</b>                                     |          |        |                | \$ -                                                             |
| 41                                                              | Water main relocation                                          | 30       | LF     | \$ 275         | \$ 8,250                                                         |
| 42                                                              | Overhead power & Comm relocation                               | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 43                                                              | Unknown Utility Relocations Allowance                          | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 44                                                              | Sewer Relocation Allowance                                     | 1        | LS     | \$ 10,000      | \$ 10,000                                                        |
| 45                                                              |                                                                |          |        |                | \$ -                                                             |
| 46                                                              | <b>Roadway Restoration</b>                                     |          |        |                | \$ -                                                             |
| 47                                                              | Length of roadway improvements                                 | 34       | FT     |                | \$ -                                                             |
| 48                                                              | Roadway width                                                  | 30       | FT     |                | \$ -                                                             |
| 49                                                              | Base Thickness                                                 | 0.5      | FT     |                | \$ -                                                             |
| 50                                                              | HMA Thickness                                                  | 0.2      | FT     |                | \$ -                                                             |
| 51                                                              | Planter Strip Width                                            | 6.0      | FT     |                | \$ -                                                             |
| 52                                                              | Crushed Aggregate Base                                         | 35       | TN     | \$ 95          | \$ 3,320                                                         |
| 53                                                              | Roadway Restoration HMA                                        | 15       | TN     | \$ 310         | \$ 4,802                                                         |
| 54                                                              | Sidewalk & Driveway Restoration, 5' wide sidewalk              | 121      | SY     | \$ 110         | \$ 13,322                                                        |
| 55                                                              | Remove & replace brick                                         | 338      | SF     | \$ 25          | \$ 8,450                                                         |
| 56                                                              | Curb and Gutter                                                | 68       | LF     | \$ 72          | \$ 4,896                                                         |
| 57                                                              | Handrails                                                      | 40       | LF     | \$ 320         | \$ 12,800                                                        |
| 58                                                              | Landscaping                                                    | 45       | SY     | \$ 68          | \$ 3,063                                                         |
| 59                                                              |                                                                |          |        |                | \$ -                                                             |
| 61                                                              | <b>Traffic Control, TESC, Misc.</b>                            |          |        |                | \$ -                                                             |
| 62                                                              | Traffic Control                                                | 1        | LS     | \$ 6,000       | \$ 6,000                                                         |
| 63                                                              | TESC @ 4% of Construction                                      | 4%       | LS     | \$ 1,113,046   | \$ 44,522                                                        |
|                                                                 |                                                                |          |        |                | \$ -                                                             |
|                                                                 |                                                                |          |        |                | \$ -                                                             |
|                                                                 |                                                                |          |        | Cost Subtotal  | \$ 1,157,568                                                     |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b>                       |                                                                |          |        |                |                                                                  |
|                                                                 | General Conditions                                             | 0%       | 1      | \$             | -                                                                |
|                                                                 | Mobilization/Demobilization                                    | 8%       | 1.08   | \$             | 92,605                                                           |
|                                                                 | Overhead & Profit (OHP)                                        | 0%       | 1      | \$             | -                                                                |
|                                                                 | Insurance                                                      | 1.5%     | 1.015  | \$             | 18,753                                                           |
|                                                                 | Bonding                                                        | 1.0%     | 1.01   | \$             | 12,689                                                           |
| <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> |                                                                |          |        |                | \$ 1,281,615                                                     |
|                                                                 | Escalation Multiplier from ENR-CCI                             | 0%       | 1.0000 | \$             | -                                                                |
| <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              |                                                                |          |        |                | \$ 1,281,615                                                     |
| <b>SUBTOTAL CONSTRUCTION COSTS</b>                              |                                                                |          |        |                | \$ 1,281,600                                                     |

| Estimate - AACE Class 5                                         |                                                                |          |        |                       |                                                                  |
|-----------------------------------------------------------------|----------------------------------------------------------------|----------|--------|-----------------------|------------------------------------------------------------------|
| <b>Agency:</b>                                                  | City of Cosmopolis                                             |          |        | <b>Estimator(s):</b>  | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| <b>Project Name:</b>                                            | Lower Mill Creek Culvert Replacements                          |          |        | <b>Date Prepared:</b> | 3/13/2026                                                        |
| <b>Location:</b>                                                | Mill Creek from G Street to Altenau Street                     |          |        | <b>Version:</b>       | 1                                                                |
| <b>Description:</b>                                             | Altenau Street Culvert Replacement                             |          |        | <b>Revision Date:</b> | N/A                                                              |
| Item No.                                                        | Item Description                                               | Quantity | Units  | Unit Cost             | Item Cost                                                        |
| 1                                                               | <b>Demolition &amp; Removal</b>                                |          |        |                       | \$ -                                                             |
| 2                                                               | Remove existing pipe culvert                                   | 190      | LF     | \$ 65                 | \$ 12,350                                                        |
| 3                                                               | Remove Structure and Obstruction Allowance                     | 1        | LS     | \$ 10,000             | \$ 10,000                                                        |
| 4                                                               | Remove existing asphalt pavement                               | 120      | SY     | \$ 28                 | \$ 3,360                                                         |
| 5                                                               | Remove existing curb and gutter                                | 72       | LF     | \$ 15                 | \$ 1,080                                                         |
| 6                                                               | Remove cement concrete sidewalk                                | 40       | SY     | \$ 28                 | \$ 1,120                                                         |
| 7                                                               | Clearing and grubbing                                          | 400      | SF     | \$ 10                 | \$ 4,000                                                         |
| 8                                                               |                                                                |          |        |                       | \$ -                                                             |
| 9                                                               | <b>Excavation &amp; Shoring</b>                                |          |        |                       | \$ -                                                             |
| 10                                                              | Roadway existing elevation                                     | 13       | FT     |                       | \$ -                                                             |
| 11                                                              | Culvert existing IE                                            | 6.7      | FT     |                       | \$ -                                                             |
| 12                                                              | Excavation work area on each side                              | 5        | FT     |                       | \$ -                                                             |
| 13                                                              | Excavation length                                              | 105      | FT     |                       | \$ -                                                             |
| 14                                                              | Excavation width                                               | 36       | FT     |                       | \$ -                                                             |
| 15                                                              | Excavation depth                                               | 7        | FT     |                       | \$ -                                                             |
| 16                                                              | Structure excavation, incl haul & disposal                     | 884      | CY     | \$ 67                 | \$ 59,216                                                        |
| 17                                                              | Structural Backfill                                            | 726      | CY     | \$ 68                 | \$ 49,398                                                        |
| 18                                                              | Temporary Shoring                                              | 1,533    | SF     | \$ 120                | \$ 183,960                                                       |
| 19                                                              |                                                                |          |        |                       | \$ -                                                             |
| 20                                                              | <b>Dewatering &amp; Stream Bypass</b>                          |          |        |                       | \$ -                                                             |
| 21                                                              | Temporary Stream Bypass Allowance                              | 1        | LS     | \$ 75,000             | \$ 75,000                                                        |
| 22                                                              | Dewatering Allowance                                           | 1        | LS     | \$ 50,000             | \$ 50,000                                                        |
| 23                                                              |                                                                |          |        |                       | \$ -                                                             |
| 24                                                              | <b>Culvert Replacement &amp; Stream Restoration</b>            |          |        |                       | \$ -                                                             |
| 25                                                              | Culvert Interior width                                         | 12       | FT     |                       | \$ -                                                             |
| 26                                                              | Culvert Interior height                                        | 5        | FT     |                       | \$ -                                                             |
| 27                                                              | Culvert Length                                                 | 95       | FT     |                       | \$ -                                                             |
| 28                                                              | Wall thickness                                                 | 1        | FT     |                       | \$ -                                                             |
| 29                                                              | Footing length                                                 | 6        | FT     |                       | \$ -                                                             |
| 30                                                              | Length of Stream improvements ( 20' upstream & 20' downstream) | 20       | FT     |                       | \$ -                                                             |
| 31                                                              | Stream width Avg.                                              | 20       | FT     |                       | \$ -                                                             |
| 32                                                              | Precast 3-sided concrete box culvert, incl. wingwalls          | 95       | LF     | \$ 3,400              | \$ 323,000                                                       |
| 33                                                              | Culvert Headwall, 2' H                                         | 1        | CY     | \$ 1,400              | \$ 1,244                                                         |
| 34                                                              | Culvert Footings, 6' W                                         | 95       | LF     | \$ 1,500              | \$ 142,500                                                       |
| 35                                                              | Crushed aggregate base                                         | 42       | CY     | \$ 98                 | \$ 4,138                                                         |
| 36                                                              | Streambed cobbles & sediment                                   | 263      | TON    | \$ 110                | \$ 28,958                                                        |
| 37                                                              | Stream Restoration & bank stabilization                        | 3,375    | SF     | \$ 45                 | \$ 151,875                                                       |
| 38                                                              | Landscape & Restoration Allowance                              | 1        | LS     | \$ 8,000              | \$ 8,000                                                         |
| 39                                                              |                                                                |          |        |                       | \$ -                                                             |
| 40                                                              | <b>Utility Relocations</b>                                     |          |        |                       | \$ -                                                             |
| 41                                                              | Water main relocation                                          | 60       | LF     | \$ 275                | \$ 16,500                                                        |
| 42                                                              | Utility Pole & associated OHP relocation                       | 1        | LS     | \$ 10,000             | \$ 10,000                                                        |
| 43                                                              | Unknown Utility Relocations Allowance                          | 1        | LS     | \$ 10,000             | \$ 10,000                                                        |
| 44                                                              |                                                                |          |        |                       | \$ -                                                             |
| 45                                                              | <b>Roadway Restoration</b>                                     |          |        |                       | \$ -                                                             |
| 46                                                              | Length of roadway improvements                                 | 36       | FT     |                       | \$ -                                                             |
| 47                                                              | Roadway width                                                  | 30       | FT     |                       | \$ -                                                             |
| 48                                                              | Base Thickness                                                 | 0.5      | FT     |                       | \$ -                                                             |
| 49                                                              | HMA Thickness                                                  | 0.2      | FT     |                       | \$ -                                                             |
| 50                                                              | Planter Strip Width                                            | 6.0      | FT     |                       | \$ -                                                             |
| 51                                                              | Crushed Aggregate Base                                         | 37       | TN     | \$ 95                 | \$ 3,515                                                         |
| 52                                                              | Roadway Restoration HMA                                        | 16       | TN     | \$ 310                | \$ 5,084                                                         |
| 53                                                              | Sidewalk Restoration, 5' wide                                  | 40       | SY     | \$ 110                | \$ 4,400                                                         |
| 54                                                              | Curb and Gutter                                                | 72       | LF     | \$ 72                 | \$ 5,184                                                         |
| 55                                                              | Handrails                                                      | 44       | LF     | \$ 320                | \$ 14,080                                                        |
| 56                                                              | Landscaping                                                    | 48       | SY     | \$ 68                 | \$ 3,264                                                         |
| 57                                                              |                                                                |          |        |                       | \$ -                                                             |
| 58                                                              | <b>Traffic Control, TESC, Misc.</b>                            |          |        |                       | \$ -                                                             |
| 59                                                              | Traffic Control                                                | 1        | LS     | \$ 6,000              | \$ 6,000                                                         |
| 60                                                              | TESC @ 4% of Construction                                      | 4%       | LS     | \$ 1,187,226          | \$ 47,489                                                        |
|                                                                 |                                                                |          |        |                       | \$ -                                                             |
|                                                                 |                                                                |          |        |                       | \$ -                                                             |
|                                                                 |                                                                |          |        | <b>Cost Subtotal</b>  | \$ 1,234,715                                                     |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b>                       |                                                                |          |        |                       |                                                                  |
|                                                                 | General Conditions                                             | 0%       | 1      | \$                    | -                                                                |
|                                                                 | Mobilization/Demobilization                                    | 8%       | 1.08   | \$                    | 98,777                                                           |
|                                                                 | Overhead & Profit (OHP)                                        | 0%       | 1      | \$                    | -                                                                |
|                                                                 | Insurance                                                      | 1.5%     | 1.015  | \$                    | 20,002                                                           |
|                                                                 | Bonding                                                        | 1.0%     | 1.01   | \$                    | 13,535                                                           |
| <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> |                                                                |          |        |                       | \$ 1,367,030                                                     |
|                                                                 | Escalation Multiplier from ENR-CCI                             | 0%       | 1.0000 | \$                    | -                                                                |
| <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              |                                                                |          |        |                       | \$ 1,367,030                                                     |
| <b>SUBTOTAL CONSTRUCTION COSTS</b>                              |                                                                |          |        |                       | \$ 1,367,000                                                     |

| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------|------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subtotal Construction Cost                                         |                  | \$ 4,054,000                              | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Mid-year Construction                                              | 2030             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Inflation                                                          | 2%               | 8%                                        | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | User input based on calculations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        | Provide comment if used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08%<br>Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Reference from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Outside Agency Construction                                        |                  | \$ 5,000                                  | Utility locations are unknown at this time. An allowance is provided to address potential relocations required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Real Estate and Right-of-Way Costs                                 |                  | \$ 4,300.00                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | WSDOT Coordination may be required due to proximity to Hwy. Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Project Contingency                                                |                  | 30%                                       | Requires comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Risk Assessment Contingency                                        | 2.50             | 0%                                        | User input based on Risk Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Other                                                              |                  |                                           | Requires description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Preliminary and Alternative Design Evaluations                     | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Geotechnical Evaluation and Engineering                            | Routine          | 3.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Design Engineering                                                 | Moderate         | 12.0%                                     | Flow within Mill Creek channel is unknown, flow monitoring recommended during design phase to inform preliminary design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Permitting and Licenses                                            | High             | 2.0%                                      | In-water work requires more permitting and environmental planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Environmental Planning and Management                              | Moderate         | 5.0%                                      | In-water work requires more permitting and environmental planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Cultural Resource                                                  | Moderate         | 1.0%                                      | Cosmopolis is within a high probability area for encountering cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Community Relations                                                | Routine          | 0.4%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Real Estate Support                                                | Low              | 0.3%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Legal Support                                                      | Low              | 0.1%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Construction Management                                            | Routine          | 8.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|            |   |             |   |   |
|------------|---|-------------|---|---|
| Likelihood | H | 3           | 4 | 5 |
|            | M | 2           | 3 | 4 |
|            | L | 1           | 2 | 3 |
|            |   | L           | M | H |
|            |   | Consequence |   |   |

|                               |      |                                                                        |
|-------------------------------|------|------------------------------------------------------------------------|
| Project Risk Assessment Score | 2.50 | When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added |
|-------------------------------|------|------------------------------------------------------------------------|

## Input tables

| Risk, Threats, or Opportunities                                                                                            | Likelihood | Consequence | Action   |
|----------------------------------------------------------------------------------------------------------------------------|------------|-------------|----------|
| <Type in or select from the list>                                                                                          | Low        | Low         | Accept   |
| Limited available staff and staff workload                                                                                 | Med        | Med         | Mitigate |
| Health and safety accident concerns                                                                                        | High       | High        | Transfer |
| Traffic impacts and delays                                                                                                 |            |             | Avoid    |
| Multiple agency coordination could impact project schedule and cost                                                        |            |             |          |
| Legal or regulatory special risk & challenges                                                                              |            |             |          |
| Regulatory changes, new regulations, and/or requirements                                                                   |            |             |          |
| Permitting challenges                                                                                                      |            |             |          |
| Sensitive Location (Park, near public schools, proximity to downtown or business areas, etc.)                              |            |             |          |
| Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.)          |            |             |          |
| Objections or opposition to the project                                                                                    |            |             |          |
| Cultural resources may be encountered                                                                                      |            |             |          |
| Unknown geotechnical and subsurface conditions (e.g.. groundwater)                                                         |            |             |          |
| Contaminated soils and environmental considerations                                                                        |            |             |          |
| Objectives and/or requirements are unclear                                                                                 |            |             |          |
| Additional scope changes may affect cost and schedule                                                                      |            |             |          |
| Unknown or changing site conditions                                                                                        |            |             |          |
| Unknown utilities and conflicts may affect project scope and cost                                                          |            |             |          |
| Site real estate or right-of-way procurement difficulties                                                                  |            |             |          |
| Weather conditions may negatively impact project schedule and cost                                                         |            |             |          |
| Affects customer utility services or requires service outages                                                              |            |             |          |
| Supply chain shortages and/or material cost increases                                                                      |            |             |          |
| Complex project and constructability issues may result in major design or construction changes                             |            |             |          |
| QA/QC Error or Omission                                                                                                    |            |             |          |
| Budget constraints or inflexibility                                                                                        |            |             |          |
| Staff Turnover                                                                                                             |            |             |          |
| There is an opportunity for enhanced engineering development and value engineering alternatives to reduce estimated costs. |            |             |          |

Association for the Advancement of Cost Engineering (AACE) International

Expected Accuracy Range

| AACE<br>Estimate<br>Class | Class Number | Construction                        | AFI <sup>1</sup> | CO <sup>2</sup> | Project<br>Contingency | Low | High | Design Phase | Level of<br>Definition |             |
|---------------------------|--------------|-------------------------------------|------------------|-----------------|------------------------|-----|------|--------------|------------------------|-------------|
|                           |              | Pricing<br>Uncertainty<br>Allowance |                  |                 |                        |     |      |              |                        |             |
|                           | 5            | AACE Class 5                        | 5%               | 0%              | 10%                    | 30% | -50% | 100%         | Planning               | 0% to 2%    |
|                           | 4            | AACE Class 4                        | 3%               | 0%              | 10%                    | 25% | -30% | 50%          | Pre-design             | 1% to 30%   |
|                           | 3            | AACE Class 3                        | 2%               | 15%             | 10%                    | 15% | -20% | 30%          | 30% - 60% Design       | 30% to 60%  |
|                           | 2            | AACE Class 2                        | 1%               | 10%             | 10%                    | 10% | -20% | 20%          | 90% Design             | 60% to 95%  |
|                           | 1            | AACE Class 1                        | 0%               | 0%              | 10%                    | 5%  | -10% | 15%          | Final Design           | 95% to 100% |

1. Allowance for Indeterminates (AFI) is an estimated cost to address unknowns that cannot be accurately quantified during the design phases. Recommended values per City of Bellevue Cost Estimating Guidelines. AFI typically not added in early project stages. The stages have a contingency amount for project costs.

2. CO assigned value of 10% typical industry standard.

|            | Preliminary and | Geotechnical   |             |                | Environmental |                   |           |             |         |              |     |
|------------|-----------------|----------------|-------------|----------------|---------------|-------------------|-----------|-------------|---------|--------------|-----|
| Project    | Alternate       | Evaluation and | Design      | Permitting and | Planning and  |                   | Community | Real Estate | Legal   | Construction |     |
| Complexity | Evaluations     | Engineering    | Engineering | Licenses       | Management    | Cultural Resource | Relations | Support     | Support | Management   |     |
| N/A        |                 | 0%             | 0%          | 0%             | 0.0%          | 0%                | 0.0%      | 0.0%        | 0.0%    | 0.00%        | 0%  |
| Low        |                 | 3%             | 2%          | 6%             | 0.3%          | 3%                | 0.5%      | 0.2%        | 0.3%    | 0.05%        | 5%  |
| Routine    |                 | 4%             | 3%          | 10%            | 0.5%          | 4%                | 0.8%      | 0.4%        | 0.5%    | 0.10%        | 8%  |
| Moderate   |                 | 5%             | 4%          | 12%            | 1.0%          | 5%                | 1.0%      | 0.5%        | 0.8%    | 0.15%        | 10% |
| High       |                 | 6%             | 5%          | 15%            | 2.0%          | 6%                | 2.0%      | 1.0%        | 1.5%    | 0.20%        | 12% |

Alternative A  
Real estate costs estimated using Land value from Grays Harbor County Property assessor

| Item               | Type | Parcel #                    | Area Needed (sq-ft) | Cost \$/sf | TCE \$/sf | PE \$/sf | Total Cost |
|--------------------|------|-----------------------------|---------------------|------------|-----------|----------|------------|
| G St Culvert       | TCE  | 34006200100                 | 1000                | \$ 4.08    | \$ 2      | \$ 4     | \$ 1,633   |
|                    |      | 34006300800                 |                     |            |           |          |            |
|                    |      | 34006201800                 |                     |            |           |          |            |
|                    |      | 34006301101                 |                     |            |           |          |            |
| H St Culvert       | TCE  | 34006100102                 | 1000                | \$ 3.91    | \$ 2      | \$ 4     | \$ 1,566   |
|                    |      | 34006100101                 |                     |            |           |          |            |
|                    |      | 34006200802                 |                     |            |           |          |            |
|                    |      | 34006200801                 |                     |            |           |          |            |
| Altenau St Culvert | TCE  | 417091541002<br>34006100402 | 1100                | \$ 2.57    | \$ 1      | \$ 2     | \$ 1,130   |
| Total Area:        |      |                             | 3100                |            |           | Total    | \$ 4,300   |

| Culvert Cros Parcel # | Area         | Total Value | \$/sf         | Land value | \$/sf           | Average \$/sf |
|-----------------------|--------------|-------------|---------------|------------|-----------------|---------------|
| E St                  | 34007000900  | 6766 \$     | 94,467.00 \$  | 13.96      | \$ 33,787.00 \$ | 4.99          |
|                       | 34007001101  | 8393 \$     | 384,559.00 \$ | 45.82      | \$ 35,135.00 \$ | 4.19          |
|                       | 34007101800  | 8674 \$     | 317,466.00 \$ | 36.60      | \$ 35,135.00 \$ | 4.05          |
|                       | 34007100100  | 11490 \$    | 435,216.00 \$ | 37.88      | \$ 37,831.00 \$ | 3.29 \$       |
| F St                  | 34006300100  | 10033.5 \$  | 223,131.00 \$ | 22.24      | \$ 35,809.00 \$ | 3.57          |
|                       | 34006301700  | 11295 \$    | 215,429.00 \$ | 19.07      | \$ 37,831.00 \$ | 3.35          |
|                       | 34006400900  | 7842 \$     | 155,014.00 \$ | 19.77      | \$ 34,349.00 \$ | 4.38          |
|                       | 34006401100  | 11080 \$    | 309,626.00 \$ | 27.94      | \$ 37,831.00 \$ | 3.41 \$       |
| G St                  | 34006200100  | 13231 \$    | 226,192.00 \$ | 17.10      | \$ 38,729.00 \$ | 2.93          |
|                       | 34006201800  | 8512 \$     | 258,627.00 \$ | 30.38      | \$ 35,135.00 \$ | 4.13          |
|                       | 34006301101  | 2558 \$     | 141,007.00 \$ | 55.12      | \$ 13,824.00 \$ | 5.40          |
|                       | 34006300800  | 9162 \$     | 299,426.00 \$ | 32.68      | \$ 35,470.00 \$ | 3.87 \$       |
| H St                  | 34006100102  | 6829 \$     | 150,406.00 \$ | 22.02      | \$ 22,423.00 \$ | 3.28          |
|                       | 34006100101  | 4252 \$     | 11,345.00 \$  | 2.67       | \$ 11,345.00 \$ | 2.67          |
|                       | 34006200802  | 4711 \$     | 383,879.00 \$ | 81.49      | \$ 27,072.00 \$ | 5.75          |
|                       | 34006200801  | 5941 \$     | 214,352.00 \$ | 36.08      | \$ 23,520.00 \$ | 3.96 \$       |
| Altenau St            | 417091541002 | 45166 \$    | 426,411.00 \$ | 9.44       | \$ 79,320.00 \$ | 1.76          |
|                       | 34006100402  | 9994 \$     | 234,828.00 \$ | 23.50      | \$ 33,787.00 \$ | 3.38 \$       |

C ST

Keyboard shortcuts: [T](#) Imagery ©2025 Airbus, Maxar Technologies | 20 m

View Details

District Information

General

Property ID034006900100

Map Number1709-14

Legal DescriptionR NIMS LOTS 1-5 INC BLK 69

Ownership

OwnerMERTENS MELINDA

Owner Address3817 E 9TH AVE

SPOKANE, WA 99202

Valuation

Total Value\$34,421

Land Value\$34,421

Building Value\$0

Land/Zoning

Area14,746.25

Land Use Code & Description91 - Undeveloped - Land

EST

Keyboard shortcuts | Mapary ©2020 Airbus, Maxar Technologies | 20 m | Terms | Report a map error

Print

View Details

District Information

General

Property ID

034007000900

Map Number

1709-14

Address

601 E ST

Legal Description

R NIMS NWLY 1/2 OF LOT 8; LOTS 9 & 10 BLK 70

Ownership

Owner

JENSEN JENNIFER

Owner Address

PO BOX 5121

EUREKA, CA 95502

Valuation

Total Value

\$94,467

Land Value

\$33,787

Building Value

\$60,680

Land/Zoning

Area

6,766.34

Land Use Code & Description

11 - Residential - Single Family



[View Details](#)

[District Information](#)

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#### General

Property ID: 034007001101  
Map Number: 1709-14  
Address: 615 E ST  
Legal Description: R NIMS NELY 1/2 OF LOTS 11-16 INC BLK 70

#### Ownership

Owner: CARLSON BRIAN & AMBER  
Owner Address: PO BOX 851  
COSMOPOLIS, WA 98537

#### Valuation

Total Value: \$384,559  
Land Value: \$35,135  
Building Value: \$349,424

#### Land/Zoning

Area: 8,393.99  
Land Use Code & Description: 11 - Residential - Single Family



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[Print](#)

#### General

Property ID: 034007101800  
Map Number: 1709-14  
Address: 616 E ST  
Legal Description: R NIMS LOTS 18-20 INC BLK 71

#### Ownership

Owner: MCGIVERON ROBERT J III & NICOLE  
Owner Address: PO BOX 739  
COSMOPOLIS, WA 98537

#### Valuation

Total Value: \$317,466  
Land Value: \$35,135  
Building Value: \$282,331

#### Land/Zoning

Area: 8,674.51  
Land Use Code & Description: 11 - Residential - Single Family



[View Details](#)

[District Information](#)

[Print](#)

#### General

Property ID: 034007100100  
Map Number: 1709-14  
Address: 602 E ST  
Legal Description: R NIMS LOTS 1-4 INC BLK 71

#### Ownership

Owner: SMITH ROBERT L & KARLA K  
Owner Address: PO BOX 556  
COSMOPOLIS, WA 98537

#### Valuation

Total Value: \$435,216  
Land Value: \$37,831  
Building Value: \$397,385

#### Land/Zoning

Area: 11,490.33  
Land Use Code & Description: 11 - Residential - Single Family

F St

[View Details](#)

District Information

 Print

### General

Property ID 034006300100

Map Number 1709-14

Address 504 F ST

Legal R NIMS LOTS 1-3 INC TGW 10' VAC 5TH ST ADJ BLK 63

### Description

### Ownership

Owner: PARSON JOANN B

Owner Address: PO BOX 516

COSMOPOLIS, WA 98537

### Valuation

Total Value: \$223,131

Land Value \$35,809

|                |           |
|----------------|-----------|
| Building Value | \$187,322 |
|----------------|-----------|

**Land/Zoning**

|      |           |
|------|-----------|
| Area | 10,033.50 |
|------|-----------|

Land Use Code & 11 - Residential - Single Family

Description

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## D.4 – Upper Mill Creek Culvert Replacement

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## PROJECT SUMMARY SHEET

|                                |                                       |
|--------------------------------|---------------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-004                      |
| <b>PROJECT NAME</b>            | Upper Mill Creek Culvert Replacements |
| <b>DATE</b>                    | 3/23/2026                             |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)                    |
| <b>CC OR DISTRIBUTION LIST</b> | Click or tap here to enter text.      |

### PROJECT DESCRIPTION

Mill Creek flows to Chehalis River through the City of Cosmopolis, WA via six culverts between C Street and Altenau Street. The water level in Mill Creek is partly controlled by the tide gates at the confluence of Mill Creek and the Chehalis River to the north of Cosmopolis. Persistent flooding has been observed at these culverts.

This project will provide design plans, specifications, and estimates (PS&E) for replacement of three of the downstream culverts including C Street, E Street, and F Street culverts.

See Figure 1 for project vicinity map.



Figure 1. Tide Gates Project Vicinity Map and Project Overview



### PROJECT COST

The opinion of probable construction cost (OPCC) of replacing the three culverts will be approximately **\$8.7 million**. This project cost was developed in 2026 dollars, with a 2% inflation applied for each year until the project's assumed start year of 2030.

See the attached estimate for breakout of costs.

### PROBLEM STATEMENT

Mill Creek culverts are undersized and contribute to persistent flooding of the residential areas surrounding Mill Creek. All six culverts along Mill Creek are undersized, the culvert crossings will be replaced downstream first and proceed upstream. This will reduce the likelihood that replacement may increase flooding due to backwater from a downstream culvert constriction.

### PROJECT GOALS

Replace C Street, E Street, and F Street culverts with three-sided box culverts that improve hydraulic efficiency and fish passage.

### PROJECT SCOPE

1. Design 20%-100%
  - a. PS&E (3 culverts)
  - b. H&H modeling update allowance
  - c. Permitting Analysis
2. Culvert construction costs
3. Design Report
  - a. Design documentation
  - b. H&H modeling results
  - c. Geotechnical services
  - d. Permitting summary
  - e. O&M recommendations

### GEOTECHNICAL

Soils information for the project area was obtained from Natural Resources Conservation Service's (NRCS) online Web Soil Survey. Soils within the Mill Creek culvert crossing area are primarily Mopang Silty Loam, which is described as deep to cemented till soils, well or moderately well drained soils that formed in glaciofluvial sediments. While soils within the area have the potential to be well drained, due to the proximity to Mill Creek, the estimates prepared for this report assume that soils will be saturated and unsuitable for reuse. A specific project geotechnical investigation is recommended early in the design process.

### UTILITIES

Water, sewer, overhead power and communication lines are within the project area according to City as-built information. Water mains and overhead utilities are anticipated to be relocated for all three culvert replacements. Survey is needed to confirm location and determine depth and size of utilities.

## ANTICIPATED MAJOR PERMITS

State Environmental Policy Act (SEPA) review  
Hydraulic Project Approval from Washington Department of Fish and Wildlife  
Shoreline substantial development permit (SSDP)  
U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)  
Other local Grays Harbor County permits

## REAL ESTATE AND EASEMENT

Culverts are located within City ROW but construction work may encroach into neighboring residential parcels that will require temporary construction easements.

## STAKEHOLDERS

| STAKEHOLDERS                               |                                                                                                           |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| NAME                                       | INTEREST                                                                                                  |
| Cosmopolis residents along Mill Creek      | Reducing flooding risks, traffic impacts, construction duration, noise, dust, access to private property. |
| Army Corps of Engineers                    | Evaluating flood plain and dam control                                                                    |
| Washington Department of Ecology           | Floodplain restoration and stream bank erosion                                                            |
| Washington Department of Fish and Wildlife | Fish passage and wildlife protection                                                                      |
| City of Cosmopolis O&M                     | Access and maintenance of facilities                                                                      |
| Utility customers                          | Service interruptions                                                                                     |
| Click or tap here to enter text.           | Click or tap here to enter text.                                                                          |
| Click or tap here to enter text.           | Click or tap here to enter text.                                                                          |

## ASSOCIATED PROJECTS

- COSI-SW-2026-002 Mill Creek Tide Gate Improvements
- COSI-SW-2026-003 Mill Creek Altenau St., H St., & G St. Culvert Crossing Replacement
- COSI-SW-2026-005 J St./4th St. Flooding and 2nd St. Outfall Improvements

## ASSUMPTIONS, CONSTRAINTS, RISKS

### ASSUMPTIONS

- No contaminated soils handling or disposal needed.
- Soils will be unsuitable for reuse.
- 20 feet of upstream and downstream of culverts will require channel improvements.
- Work will be sequenced to minimize process, service, and community interruptions.
- There will be utility relocations for water, sewer, storm, overhead power, and overhead communications. Extent of work is unknown at this time.
- Project construction will be seasonally restricted due to presence of fish in the stream.

## **RISKS AND CONSTRAINTS**

### **Project Management Risk**

- Project schedule constraints or timing of project execution may impact bottom line costs (i.e., fish window, etc.)
- Cultural resources may be encountered
- Multiple agency coordination could impact project schedule and cost
- Budget constraints or inflexibility due to grant funding.

### **Project City Team Risk**

- Staff turnover could impact project schedule.

### **Project Complexity Risk**

- QA/QC error or omission
- Regulatory changes, new regulations, and/or requirements
- Permitting challenges

## **OPPORTUNITIES**

N/A

## **EXCLUSIONS**

N/A

| Estimate - AACE Class 5                                                                               |                                            |          |       |                |                                                                  |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------|----------|-------|----------------|------------------------------------------------------------------|
| Agency:                                                                                               | City of Cosmopolis                         |          |       | Estimator(s):  | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Project Name:                                                                                         | Upper Mill Creek Culvert Replacements      |          |       | Date Prepared: | 3/13/2026                                                        |
| Location:                                                                                             | Mill Creek from G Street to Altenau Street |          |       | Version:       | 1                                                                |
| Description:                                                                                          | Upper Mill Creek Culvert Replacements      |          |       | Revision Date: | N/A                                                              |
| DIRECT: SUBTOTAL CONSTRUCTION COSTS                                                                   |                                            |          |       |                |                                                                  |
| Item No.                                                                                              | Item Description                           | Quantity | Units | Unit Cost      | Item Cost                                                        |
| 1                                                                                                     | C St Culvert Replacement                   | 1        | LS    | \$ 879,800     | \$ 879,800                                                       |
| 2                                                                                                     | E Street Culvert Replacement               | 1        | LS    | \$ 1,075,400   | \$ 1,075,400                                                     |
| 3                                                                                                     | F Street Culvert Replacement               | 1        | LS    | \$ 1,624,300   | \$ 1,624,300                                                     |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
|                                                                                                       |                                            |          |       |                | \$ -                                                             |
| Subtotal Construction Cost                                                                            |                                            |          |       |                | \$ 3,579,500                                                     |
| Allowance for Indeterminates (AFI)                                                                    |                                            |          |       |                | \$ -                                                             |
| Permits for Construction                                                                              |                                            |          |       |                | \$ -                                                             |
| ESTIMATED PROBABLE COST OF CONSTRUCTION BID                                                           |                                            |          |       |                | \$ 3,579,500                                                     |
| DIRECT: SUBTOTAL ADDITIONAL CONSTRUCTION COSTS                                                        |                                            |          |       |                |                                                                  |
| Construction Change Order Allowance                                                                   |                                            |          |       |                | \$ 357,950                                                       |
| Material Pricing Uncertainty Allowance                                                                |                                            |          |       |                | \$ -                                                             |
| Construction Sales Tax                                                                                |                                            |          |       |                | \$ 350,433                                                       |
| Outside Agency Construction                                                                           |                                            |          |       |                | \$ 5,000                                                         |
| Subtotal Additional Construction Costs                                                                |                                            |          |       |                | \$ 713,383                                                       |
| TOTAL DIRECT CONSTRUCTION COSTS                                                                       |                                            |          |       |                | \$ 4,292,880                                                     |
| INDIRECT: NON-CONSTRUCTION COSTS                                                                      |                                            |          |       |                |                                                                  |
| Preliminary, Geotechnical, and Design Engineering                                                     |                                            |          |       |                | \$ 643,932                                                       |
| Environmental Planning, Management, Permitting & Licenses, Cultural Resource, and Community Relations |                                            |          |       |                | \$ 360,602                                                       |
| Real Estate, Easements, and ROW Costs                                                                 |                                            |          |       |                | \$ 16,479                                                        |
| Legal Support                                                                                         |                                            |          |       |                | \$ 2,146                                                         |
| Construction Management                                                                               |                                            |          |       |                | \$ 343,430                                                       |
| Other                                                                                                 |                                            |          |       |                | \$ -                                                             |
| TOTAL INDIRECT NON-CONSTRUCTION COSTS                                                                 |                                            |          |       |                | \$ 1,366,590                                                     |
| Contingency (Includes Risk Assessment Contingency)                                                    |                                            |          |       |                | \$ 1,697,800                                                     |
| TOTAL PROJECT COST (YEAR 2026)                                                                        |                                            |          |       |                | \$ 7,357,300                                                     |
| Inflation to Mid-year Construction                                                                    |                                            |          |       |                | \$ 1,324,314                                                     |
| ADJUSTED TOTAL PROJECT COST (YEAR 2035)                                                               |                                            |          |       |                | \$ 8,681,600                                                     |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2035                  |

| Estimate - AACE Class 5                                         |                                                                |          |        |                      |                                |
|-----------------------------------------------------------------|----------------------------------------------------------------|----------|--------|----------------------|--------------------------------|
| Agency:                                                         | City of Cosmopolis                                             |          |        | Estimator(s):        | Cindy Kinzer<br>Jess Dexheimer |
| Project Name:                                                   | Upper Mill Creek Culvert Replacements                          |          |        | Date Prepared:       | 3/12/2026                      |
| Location:                                                       | Mill Creek from G Street to Altenau Street                     |          |        | Version:             | 1                              |
| Description:                                                    | C Street Culvert Replacement                                   |          |        | Revision Date:       | N/A                            |
| Item No.                                                        | Item Description                                               | Quantity | Units  | Unit Cost            | Item Cost                      |
| 1                                                               | <b>Demolition &amp; Removal</b>                                |          |        |                      | \$ -                           |
| 2                                                               | Remove existing pipe culverts                                  | 90       | LF     | \$ 65                | \$ 5,850                       |
| 3                                                               | Remove Structure and Obstruction Allowance                     | 1        | LS     | \$ 10,000            | \$ 10,000                      |
| 4                                                               | Remove existing asphalt pavement                               | 160      | SY     | \$ 28                | \$ 4,480                       |
| 5                                                               | Remove existing curb and gutter                                | 96       | LF     | \$ 15                | \$ 1,440                       |
| 6                                                               | Remove cement concrete sidewalk                                | 27       | SY     | \$ 28                | \$ 747                         |
| 7                                                               | Clearing and grubbing                                          | 400      | SF     | \$ 10                | \$ 4,000                       |
| 8                                                               |                                                                |          |        |                      | \$ -                           |
| 9                                                               | <b>Excavation &amp; Shoring</b>                                |          |        |                      | \$ -                           |
| 10                                                              | Roadway existing elevation                                     | 27       | FT     |                      | \$ -                           |
| 11                                                              | Culvert existing IE                                            | 14.8     | FT     |                      | \$ -                           |
| 12                                                              | Excavation work area on each side                              | 5        | FT     |                      | \$ -                           |
| 13                                                              | Excavation length                                              | 45       | FT     |                      | \$ -                           |
| 14                                                              | Excavation width                                               | 28       | FT     |                      | \$ -                           |
| 15                                                              | Excavation depth                                               | 13       | FT     |                      | \$ -                           |
| 16                                                              | Structure excavation, incl haul & disposal                     | 550      | CY     | \$ 67                | \$ 36,840                      |
| 17                                                              | Structural Backfill                                            | 492      | CY     | \$ 68                | \$ 33,438                      |
| 18                                                              | Temporary Shoring                                              | 1,141    | SF     | \$ 120               | \$ 136,944                     |
| 19                                                              |                                                                |          |        |                      | \$ -                           |
| 20                                                              | <b>Dewatering &amp; Stream Bypass</b>                          |          |        |                      | \$ -                           |
| 21                                                              | Temporary Stream Bypass Allowance                              | 1        | LS     | \$ 75,000            | \$ 75,000                      |
| 22                                                              | Dewatering Allowance                                           | 1        | LS     | \$ 50,000            | \$ 50,000                      |
| 23                                                              |                                                                |          |        |                      | \$ -                           |
| 24                                                              | <b>Culvert Replacement &amp; Stream Restoration</b>            |          |        |                      | \$ -                           |
| 25                                                              | Culvert Interior width                                         | 10       | FT     |                      | \$ -                           |
| 26                                                              | Culvert Interior height                                        | 4        | FT     |                      | \$ -                           |
| 27                                                              | Culvert Length                                                 | 45       | FT     |                      | \$ -                           |
| 28                                                              | Wall thickness                                                 | 1        | FT     |                      | \$ -                           |
| 29                                                              | Footing length                                                 | 3        | FT     |                      | \$ -                           |
| 30                                                              | Length of Stream improvements ( 20' upstream & 20' downstream) | 20       | FT     |                      | \$ -                           |
| 31                                                              | Stream width Avg.                                              | 20       | FT     |                      | \$ -                           |
| 32                                                              | Precast 3-sided concrete box culvert, incl. wingwalls          | 45       | LF     | \$ 3,400             | \$ 153,000                     |
| 33                                                              | Culvert Headwall, 2' H                                         | 1        | CY     | \$ 1,400             | \$ 1,037                       |
| 34                                                              | Culvert Footings, 6' W                                         | 45       | LF     | \$ 1,500             | \$ 67,500                      |
| 35                                                              | Crushed aggregate base                                         | 10       | CY     | \$ 98                | \$ 980                         |
| 36                                                              | Streambed cobbles & sediment                                   | 166      | TON    | \$ 110               | \$ 18,233                      |
| 37                                                              | Stream Restoration & bank stabilization                        | 2,125    | SF     | \$ 45                | \$ 95,625                      |
| 38                                                              | Landscape & Restoration Allowance                              | 1        | LS     | \$ 5,000             | \$ 5,000                       |
| 39                                                              |                                                                |          |        |                      | \$ -                           |
| 40                                                              | <b>Utility Relocations</b>                                     |          |        |                      | \$ -                           |
| 41                                                              | Water main relocation                                          | 30       | LF     | \$ 275               | \$ 8,250                       |
| 42                                                              | Unknown Utility Relocations Allowance                          | 1        | LS     | \$ 10,000            | \$ 10,000                      |
| 43                                                              |                                                                |          |        |                      | \$ -                           |
| 44                                                              | <b>Roadway Restoration</b>                                     |          |        |                      | \$ -                           |
| 45                                                              | Length of roadway improvements                                 | 48       | FT     |                      | \$ -                           |
| 46                                                              | Roadway width                                                  | 30       | FT     |                      | \$ -                           |
| 47                                                              | Base Thickness                                                 | 0.5      | FT     |                      | \$ -                           |
| 48                                                              | HMA Thickness                                                  | 0.2      | FT     |                      | \$ -                           |
| 49                                                              | Planter Strip Width                                            | 6.0      | FT     |                      | \$ -                           |
| 50                                                              | Crushed Aggregate Base                                         | 49       | TN     | \$ 95                | \$ 4,687                       |
| 51                                                              | Roadway Restoration HMA                                        | 22       | TN     | \$ 310               | \$ 6,779                       |
| 52                                                              | Sidewalk Restoration, 5' wide                                  | 27       | SY     | \$ 110               | \$ 2,933                       |
| 53                                                              | Curb and Gutter                                                | 96       | LF     | \$ 72                | \$ 6,912                       |
| 54                                                              | Handrails                                                      | 44       | LF     | \$ 320               | \$ 14,080                      |
| 55                                                              | Roadside Restoration Allowance                                 | 64       | SY     | \$ 68                | \$ 4,352                       |
| 56                                                              |                                                                |          |        |                      | \$ -                           |
| 57                                                              | <b>Traffic Control, TESC, Misc.</b>                            |          |        |                      | \$ -                           |
| 58                                                              | Traffic Control                                                | 1        | LS     | \$ 6,000             | \$ 6,000                       |
| 59                                                              | TESC @ 4% of Construction                                      | 4%       | LS     | \$ 764,105           | \$ 30,564                      |
|                                                                 |                                                                |          |        |                      | \$ -                           |
|                                                                 |                                                                |          |        |                      | \$ -                           |
|                                                                 |                                                                |          |        | <b>Cost Subtotal</b> | <b>\$ 794,670</b>              |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b>                       |                                                                |          |        |                      |                                |
| General Conditions                                              |                                                                | 0%       | 1      | \$                   | -                              |
| Mobilization/Demobilization                                     |                                                                | 8%       | 1.08   | \$                   | 63,574                         |
| Overhead & Profit (OHP)                                         |                                                                | 0%       | 1      | \$                   | -                              |
| Insurance                                                       |                                                                | 1.5%     | 1.015  | \$                   | 12,874                         |
| Bonding                                                         |                                                                | 1.0%     | 1.01   | \$                   | 8,711                          |
| <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> |                                                                |          |        |                      | <b>\$ 879,828</b>              |
| Escalation Multiplier from ENR-CCI                              |                                                                | 0%       | 1.0000 | \$                   | -                              |
| <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              |                                                                |          |        |                      | <b>\$ 879,828</b>              |
| <b>SUBTOTAL CONSTRUCTION COSTS</b>                              |                                                                |          |        |                      | <b>\$ 879,800</b>              |

| Estimate - AACE Class 5                   |                                                                |                                    |       |                                                                 |                                |
|-------------------------------------------|----------------------------------------------------------------|------------------------------------|-------|-----------------------------------------------------------------|--------------------------------|
| Agency:                                   | City of Cosmopolis                                             |                                    |       | Estimator(s):                                                   | Cindy Kinzer<br>Jess Dexheimer |
| Project Name:                             | Upper Mill Creek Culvert Replacements                          |                                    |       | Date Prepared:                                                  | 3/12/2026                      |
| Location:                                 | Mill Creek from G Street to Altenau Street                     |                                    |       | Version:                                                        | 1                              |
| Description:                              | E Street Culvert Replacement                                   |                                    |       | Revision Date:                                                  | N/A                            |
| Item No.                                  | Item Description                                               | Quantity                           | Units | Unit Cost                                                       | Item Cost                      |
| 1                                         | <b>Demolition &amp; Removal</b>                                |                                    |       |                                                                 | \$ -                           |
| 2                                         | Remove existing pipe culvert                                   | 134                                | LF    | \$ 65                                                           | \$ 8,710                       |
| 3                                         | Remove Structure and Obstruction Allowance                     | 1                                  | LS    | \$ 10,000                                                       | \$ 10,000                      |
| 4                                         | Remove existing asphalt pavement                               | 113                                | SY    | \$ 28                                                           | \$ 3,173                       |
| 5                                         | Remove existing curb and gutter                                | 68                                 | LF    | \$ 15                                                           | \$ 1,020                       |
| 6                                         | Remove cement concrete sidewalk                                | 38                                 | SY    | \$ 28                                                           | \$ 1,058                       |
| 7                                         | Clearing and grubbing                                          | 400                                | SF    | \$ 10                                                           | \$ 4,000                       |
| 8                                         |                                                                |                                    |       |                                                                 | \$ -                           |
| 9                                         | <b>Excavation &amp; Shoring</b>                                |                                    |       |                                                                 | \$ -                           |
| 10                                        | Roadway existing elevation                                     | 19.5                               | FT    |                                                                 | \$ -                           |
| 11                                        | Culvert existing IE                                            | 12.8                               | FT    |                                                                 | \$ -                           |
| 12                                        | Excavation work area on each side                              | 5                                  | FT    |                                                                 | \$ -                           |
| 13                                        | Excavation length                                              | 77                                 | FT    |                                                                 | \$ -                           |
| 14                                        | Excavation width                                               | 34                                 | FT    |                                                                 | \$ -                           |
| 15                                        | Excavation depth                                               | 8                                  | FT    |                                                                 | \$ -                           |
| 16                                        | Structure excavation, incl haul & disposal                     | 648                                | CY    | \$ 67                                                           | \$ 43,429                      |
| 17                                        | Structural Backfill                                            | 567                                | CY    | \$ 68                                                           | \$ 38,555                      |
| 18                                        | Temporary Shoring                                              | 1,184                              | SF    | \$ 120                                                          | \$ 142,111                     |
| 19                                        |                                                                |                                    |       |                                                                 | \$ -                           |
| 20                                        | <b>Dewatering &amp; Stream Bypass</b>                          |                                    |       |                                                                 | \$ -                           |
| 21                                        | Temporary Stream Bypass Allowance                              | 1                                  | LS    | \$ 75,000                                                       | \$ 75,000                      |
| 22                                        | Dewatering Allowance                                           | 1                                  | LS    | \$ 50,000                                                       | \$ 50,000                      |
| 23                                        |                                                                |                                    |       |                                                                 | \$ -                           |
| 24                                        | <b>Culvert Replacement &amp; Stream Restoration</b>            |                                    |       |                                                                 | \$ -                           |
| 25                                        | Interior width                                                 | 10                                 | FT    |                                                                 | \$ -                           |
| 26                                        | Interior height                                                | 5                                  | FT    |                                                                 | \$ -                           |
| 27                                        | Length                                                         | 67                                 | FT    |                                                                 | \$ -                           |
| 28                                        | Wall thickness                                                 | 1                                  | FT    |                                                                 | \$ -                           |
| 29                                        | Footing length                                                 | 6                                  | FT    |                                                                 | \$ -                           |
| 30                                        | Length of Stream improvements ( 20' upstream & 20' downstream) | 20                                 | FT    |                                                                 | \$ -                           |
| 31                                        | Stream width Avg.                                              | 20                                 | FT    |                                                                 | \$ -                           |
| 32                                        | Precast 3-sided concrete box culvert, incl. wingwalls          | 67                                 | LF    | \$ 3,400                                                        | \$ 227,800                     |
| 33                                        | Culvert Headwall, 2' H                                         | 1                                  | CY    | \$ 1,400                                                        | \$ 1,037                       |
| 34                                        | Culvert Footings, 6' W                                         | 67                                 | LF    | \$ 1,500                                                        | \$ 100,500                     |
| 35                                        | Crushed aggregate base                                         | 30                                 | CY    | \$ 98                                                           | \$ 2,918                       |
| 36                                        | Streambed cobbles & sediment                                   | 209                                | TON   | \$ 110                                                          | \$ 22,952                      |
| 37                                        | Stream Restoration & bank stabilization                        | 2,675                              | SF    | \$ 45                                                           | \$ 120,375                     |
| 38                                        | Landscape & Restoration Allowance                              | 1                                  | LS    | \$ 5,000                                                        | \$ 5,000                       |
| 39                                        |                                                                |                                    |       |                                                                 | \$ -                           |
| 40                                        | <b>Utility Relocations</b>                                     |                                    |       |                                                                 | \$ -                           |
| 41                                        | Water main relocation                                          | 30                                 | LF    | \$ 275                                                          | \$ 8,250                       |
| 42                                        | Utility Pole & associated OHP relocation                       | 1                                  | LS    | \$ 10,000                                                       | \$ 10,000                      |
| 43                                        | Unknown Utility Relocations Allowance                          | 1                                  | LS    | \$ 10,000                                                       | \$ 10,000                      |
| 44                                        |                                                                |                                    |       |                                                                 | \$ -                           |
| 45                                        | <b>Roadway Restoration</b>                                     |                                    |       |                                                                 | \$ -                           |
| 46                                        | Length of roadway improvements                                 | 34                                 | FT    |                                                                 | \$ -                           |
| 47                                        | Roadway width                                                  | 30                                 | FT    |                                                                 | \$ -                           |
| 48                                        | Base Thickness                                                 | 0.5                                | FT    |                                                                 | \$ -                           |
| 49                                        | HMA Thickness                                                  | 0.2                                | FT    |                                                                 | \$ -                           |
| 50                                        | Planter Strip Width                                            | 6.0                                | FT    |                                                                 | \$ -                           |
| 51                                        | Crushed Aggregate Base                                         | 35                                 | TN    | \$ 95                                                           | \$ 3,320                       |
| 52                                        | Roadway Restoration HMA                                        | 15                                 | TN    | \$ 310                                                          | \$ 4,802                       |
| 53                                        | Sidewalk Restoration, 5' wide                                  | 38                                 | SY    | \$ 110                                                          | \$ 4,156                       |
| 54                                        | Curb and Gutter                                                | 68                                 | LF    | \$ 72                                                           | \$ 4,896                       |
| 55                                        | Handrails                                                      | 40                                 | LF    | \$ 320                                                          | \$ 12,800                      |
| 56                                        | Landscaping                                                    | 45                                 | SY    | \$ 68                                                           | \$ 3,083                       |
| 57                                        |                                                                |                                    |       |                                                                 | \$ -                           |
| 58                                        | <b>Traffic Control, TESC, Misc.</b>                            |                                    |       |                                                                 | \$ -                           |
| 59                                        | Traffic Control                                                | 1                                  | LS    | \$ 15,000                                                       | \$ 15,000                      |
| 60                                        | TESC @ 4% of Construction                                      | 4%                                 | LS    | \$ 933,943                                                      | \$ 37,358                      |
|                                           |                                                                |                                    |       |                                                                 | \$ -                           |
|                                           |                                                                |                                    |       |                                                                 | \$ -                           |
|                                           |                                                                |                                    |       | <b>Cost Subtotal</b>                                            | \$ 971,301                     |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b> |                                                                |                                    |       |                                                                 |                                |
|                                           |                                                                | General Conditions                 | 0%    | 1                                                               | \$ -                           |
|                                           |                                                                | Mobilization/Demobilization        | 8%    | 1.08                                                            | \$ 77,704                      |
|                                           |                                                                | Overhead & Profit (OHP)            | 0%    | 1                                                               | \$ -                           |
|                                           |                                                                | Insurance                          | 1.5%  | 1.015                                                           | \$ 15,735                      |
|                                           |                                                                | Bonding                            | 1.0%  | 1.01                                                            | \$ 10,647                      |
|                                           |                                                                |                                    |       | <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> | \$ 1,075,388                   |
|                                           |                                                                | Escalation Multiplier from ENR-CCI | 0%    | 1.0000                                                          | \$ -                           |
|                                           |                                                                |                                    |       | <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              | \$ 1,075,388                   |
|                                           |                                                                |                                    |       | <b>SUBTOTAL CONSTRUCTION COSTS</b>                              | \$ 1,075,400                   |

| Estimate - AACE Class 5                   |                                                                |          |        |                                                                 |                                |
|-------------------------------------------|----------------------------------------------------------------|----------|--------|-----------------------------------------------------------------|--------------------------------|
| Agency:                                   | City of Cosmopolis                                             |          |        | Estimator(s):                                                   | Cindy Kinzer<br>Jess Dexheimer |
| Project Name:                             | Upper Mill Creek Culvert Replacements                          |          |        | Date Prepared:                                                  | 3/12/2026                      |
| Location:                                 | Mill Creek from G Street to Altenau Street                     |          |        | Version:                                                        | 1                              |
| Description:                              | F Street Culvert Replacement                                   |          |        | Revision Date:                                                  | N/A                            |
| Item No.                                  | Item Description                                               | Quantity | Units  | Unit Cost                                                       | Item Cost                      |
| 1                                         | <b>Demolition &amp; Removal</b>                                |          |        |                                                                 | \$ -                           |
| 2                                         | Remove existing pipe culvert                                   | 482      | LF     | \$ 65                                                           | \$ 31,330                      |
| 3                                         | Remove Structure and Obstruction Allowance                     | 1        | LS     | \$ 10,000                                                       | \$ 10,000                      |
| 4                                         | Remove existing asphalt pavement                               | 113      | SY     | \$ 28                                                           | \$ 3,173                       |
| 5                                         | Remove existing curb and gutter                                | 68       | LF     | \$ 15                                                           | \$ 1,020                       |
| 6                                         | Remove cement concrete sidewalk                                | 38       | SY     | \$ 28                                                           | \$ 1,058                       |
| 7                                         | Clearing and grubbing                                          | 400      | SF     | \$ 10                                                           | \$ 4,000                       |
| 8                                         |                                                                |          |        |                                                                 | \$ -                           |
| 9                                         | <b>Excavation &amp; Shoring</b>                                |          |        |                                                                 | \$ -                           |
| 10                                        | Roadway existing elevation                                     | 17.0     | FT     |                                                                 | \$ -                           |
| 11                                        | Culvert existing IE                                            | 10.3     | FT     |                                                                 | \$ -                           |
| 12                                        | Excavation work area on each side                              | 5        | FT     |                                                                 | \$ -                           |
| 13                                        | Excavation length                                              | 128      | FT     |                                                                 | \$ -                           |
| 14                                        | Excavation width                                               | 34       | FT     |                                                                 | \$ -                           |
| 15                                        | Excavation depth                                               | 8        | FT     |                                                                 | \$ -                           |
| 16                                        | Structure excavation, incl haul & disposal                     | 972      | CY     | \$ 67                                                           | \$ 65,151                      |
| 17                                        | Structural Backfill                                            | 915      | CY     | \$ 68                                                           | \$ 62,232                      |
| 18                                        | Temporary Shoring                                              | 1,953    | SF     | \$ 120                                                          | \$ 234,394                     |
| 19                                        |                                                                |          |        |                                                                 | \$ -                           |
| 20                                        | <b>Dewatering &amp; Stream Bypass</b>                          |          |        |                                                                 | \$ -                           |
| 21                                        | Temporary Stream Bypass Allowance                              | 1        | LS     | \$ 75,000                                                       | \$ 75,000                      |
| 22                                        | Dewatering Allowance                                           | 1        | LS     | \$ 50,000                                                       | \$ 50,000                      |
| 23                                        |                                                                |          |        |                                                                 | \$ -                           |
| 24                                        | <b>Culvert Replacement &amp; Stream Restoration</b>            |          |        |                                                                 | \$ -                           |
| 25                                        | Interior width                                                 | 10       | FT     |                                                                 | \$ -                           |
| 26                                        | Interior height                                                | 5        | FT     |                                                                 | \$ -                           |
| 27                                        | Length                                                         | 118      | FT     |                                                                 | \$ -                           |
| 28                                        | Wall thickness                                                 | 1        | FT     |                                                                 | \$ -                           |
| 29                                        | Footing length                                                 | 6        | FT     |                                                                 | \$ -                           |
| 30                                        | Length of Stream improvements ( 20' upstream & 20' downstream) | 20       | FT     |                                                                 | \$ -                           |
| 31                                        | Stream width Avg.                                              | 20       | FT     |                                                                 | \$ -                           |
| 32                                        | Precast 3-sided concrete box culvert, incl. wingwalls          | 118      | LF     | \$ 3,400                                                        | \$ 401,200                     |
| 33                                        | Culvert Headwall, 2' H                                         | 1        | CY     | \$ 1,400                                                        | \$ 1,037                       |
| 34                                        | Culvert Footings, 6' W                                         | 118      | LF     | \$ 1,500                                                        | \$ 177,000                     |
| 35                                        | Crushed aggregate base                                         | 52       | CY     | \$ 98                                                           | \$ 5,140                       |
| 36                                        | Streambed cobbles & sediment                                   | 308      | TON    | \$ 110                                                          | \$ 33,891                      |
| 37                                        | Stream Restoration & bank stabilization                        | 3,950    | SF     | \$ 45                                                           | \$ 177,750                     |
| 38                                        | Landscape & Restoration Allowance                              | 1        | LS     | \$ 10,000                                                       | \$ 10,000                      |
| 39                                        |                                                                |          |        |                                                                 | \$ -                           |
| 40                                        | <b>Utility Relocations</b>                                     |          |        |                                                                 | \$ -                           |
| 41                                        | Water main relocation                                          | 30       | LF     | \$ 275                                                          | \$ 8,250                       |
| 42                                        | Utility Pole & associated OHP relocation                       | 1        | LS     | \$ 10,000                                                       | \$ 10,000                      |
| 43                                        | Unknown Utility Relocations Allowance                          | 1        | LS     | \$ 10,000                                                       | \$ 10,000                      |
| 44                                        |                                                                |          |        |                                                                 | \$ -                           |
| 45                                        | <b>Roadway Restoration</b>                                     |          |        |                                                                 | \$ -                           |
| 46                                        | Length of roadway improvements                                 | 34       | FT     |                                                                 | \$ -                           |
| 47                                        | Roadway width                                                  | 30       | FT     |                                                                 | \$ -                           |
| 48                                        | Base Thickness                                                 | 0.5      | FT     |                                                                 | \$ -                           |
| 49                                        | HMA Thickness                                                  | 0.2      | FT     |                                                                 | \$ -                           |
| 50                                        | Planter Strip Width                                            | 6.0      | FT     |                                                                 | \$ -                           |
| 51                                        | Crushed Aggregate Base                                         | 35       | TN     | \$ 95                                                           | \$ 3,320                       |
| 52                                        | Roadway Restoration HMA                                        | 15       | TN     | \$ 310                                                          | \$ 4,802                       |
| 53                                        | Sidewalk Restoration, 5' wide                                  | 38       | SY     | \$ 110                                                          | \$ 4,156                       |
| 54                                        | Curb and Gutter                                                | 68       | LF     | \$ 72                                                           | \$ 4,896                       |
| 55                                        | Handrails                                                      | 40       | LF     | \$ 320                                                          | \$ 12,800                      |
| 56                                        | Landscaping                                                    | 45       | SY     | \$ 68                                                           | \$ 3,083                       |
| 57                                        |                                                                |          |        |                                                                 | \$ -                           |
| 58                                        | <b>Traffic Control, TESC, Misc.</b>                            |          |        |                                                                 | \$ -                           |
| 59                                        | Traffic Control                                                | 1        | LS     | \$ 6,000                                                        | \$ 6,000                       |
| 60                                        | TESC @ 4% of Construction                                      | 4%       | LS     | \$ 1,410,681                                                    | \$ 56,427                      |
|                                           |                                                                |          |        |                                                                 | \$ -                           |
|                                           |                                                                |          |        |                                                                 | \$ -                           |
|                                           |                                                                |          |        | <b>Cost Subtotal</b>                                            | \$ 1,467,108                   |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b> |                                                                |          |        |                                                                 |                                |
|                                           | General Conditions                                             | 0%       | 1      | \$                                                              | -                              |
|                                           | Mobilization/Demobilization                                    | 8%       | 1.08   | \$                                                              | 117,369                        |
|                                           | Overhead & Profit (OHP)                                        | 0%       | 1      | \$                                                              | -                              |
|                                           | Insurance                                                      | 1.5%     | 1.015  | \$                                                              | 23,767                         |
|                                           | Bonding                                                        | 1.0%     | 1.01   | \$                                                              | 16,082                         |
|                                           |                                                                |          |        | <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> | \$ 1,624,327                   |
|                                           | Escalation Multiplier from ENR-CCI                             | 0%       | 1.0000 | \$                                                              | -                              |
|                                           |                                                                |          |        | <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              | \$ 1,624,327                   |
|                                           |                                                                |          |        | <b>SUBTOTAL CONSTRUCTION COSTS</b>                              | \$ 1,624,300                   |

| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------|------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Subtotal Construction Cost                                         |                  | \$ 3,579,500                              | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mid-year Construction                                              | 2035             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Inflation                                                          | 2%               | 18%                                       | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | User input based on calculations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        | Provide comment if used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08%<br>Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Referece from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Outside Agency Construction                                        |                  | \$ 5,000                                  | Utility locations are unknown at this time. An allowance is provided to address potential relocations required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Real Estate and Right-of-Way Costs                                 |                  | \$ 3,600.00                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | WSDOT Coordination may be required due to proximity to Hwy. Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Project Contingency                                                |                  | 30%                                       | Requires comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Risk Assessment Contingency                                        | 2.50             | 0%                                        | User input based on Risk Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other                                                              |                  |                                           | Requires description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preliminary and Alternative Design Evaluations                     | N/A              | 0.0%                                      | Completed as part of MOIP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Geotechnical Evaluation and Engineering                            | Routine          | 3.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Design Engineering                                                 | Moderate         | 12.0%                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Permitting and Licences                                            | High             | 2.0%                                      | In-water work requires more permitting and environmental planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Environmental Planning and Management                              | Moderate         | 5.0%                                      | In-water work requires more permitting and environmental planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cultural Resource                                                  | Moderate         | 1.0%                                      | Cosmopolis is within a high probability area for encountering cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Community Relations                                                | Routine          | 0.4%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Real Estate Support                                                | Low              | 0.3%                                      | Majority of project will be located within City ROW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Legal Support                                                      | Low              | 0.1%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Construction Management                                            | Routine          | 8.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|            |   |             |   |   |
|------------|---|-------------|---|---|
| Likelihood | H | 3           | 4 | 5 |
|            | M | 2           | 3 | 4 |
|            | L | 1           | 2 | 3 |
|            |   | L           | M | H |
|            |   | Consequence |   |   |

|                               |      |                                                                        |
|-------------------------------|------|------------------------------------------------------------------------|
| Project Risk Assessment Score | 2.50 | When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added |
|-------------------------------|------|------------------------------------------------------------------------|

## Input tables

| Risk, Threats, or Opportunities                                                                                            | Likelihood | Consequence | Action   |
|----------------------------------------------------------------------------------------------------------------------------|------------|-------------|----------|
| <Type in or select from the list>                                                                                          | Low        | Low         | Accept   |
| Limited available staff and staff workload                                                                                 | Med        | Med         | Mitigate |
| Health and safety accident concerns                                                                                        | High       | High        | Transfer |
| Traffic impacts and delays                                                                                                 |            |             | Avoid    |
| Multiple agency coordination could impact project schedule and cost                                                        |            |             |          |
| Legal or regulatory special risk & challenges                                                                              |            |             |          |
| Regulatory changes, new regulations, and/or requirements                                                                   |            |             |          |
| Permitting challenges                                                                                                      |            |             |          |
| Sensitive Location (Park, near public schools, proximity to downtown or business areas, etc.)                              |            |             |          |
| Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.)          |            |             |          |
| Objections or opposition to the project                                                                                    |            |             |          |
| Cultural resources may be encountered                                                                                      |            |             |          |
| Unknown geotechnical and subsurface conditions (e.g. groundwater)                                                          |            |             |          |
| Contaminated soils and environmental considerations                                                                        |            |             |          |
| Objectives and/or requirements are unclear                                                                                 |            |             |          |
| Additional scope changes may affect cost and schedule                                                                      |            |             |          |
| Unknown or changing site conditions                                                                                        |            |             |          |
| Unknown utilities and conflicts may affect project scope and cost                                                          |            |             |          |
| Site real estate or right-of-way procurement difficulties                                                                  |            |             |          |
| Weather conditions may negatively impact project schedule and cost                                                         |            |             |          |
| Affects customer utility services or requires service outages                                                              |            |             |          |
| Supply chain shortages and/or material cost increases                                                                      |            |             |          |
| Complex project and constructibility issues may result in major design or construction changes                             |            |             |          |
| QA/QC Error or Omission                                                                                                    |            |             |          |
| Budget constraints or inflexibility                                                                                        |            |             |          |
| Staff Turnover                                                                                                             |            |             |          |
| There is an opportunity for enhanced engineering development and value engineering alternatives to reduce estimated costs. |            |             |          |

Association for the Advancement of Cost Engineering (AACE) International

|                     |                |                                            |                  |                 |                     | Expected Accuracy Range |      |                  |                     |
|---------------------|----------------|--------------------------------------------|------------------|-----------------|---------------------|-------------------------|------|------------------|---------------------|
| AACE Estimate Class | Class Number   | Construction Pricing Uncertainty Allowance | AFI <sup>1</sup> | CO <sup>2</sup> | Project Contingency | Low                     | High | Design Phase     | Level of Definition |
|                     | 5 AACE Class 5 | 5%                                         | 0%               | 10%             | 30%                 | -50%                    | 100% | Planning         | 0% to 2%            |
|                     | 4 AACE Class 4 | 3%                                         | 0%               | 10%             | 25%                 | -30%                    | 50%  | Pre-design       | 1% to 30%           |
|                     | 3 AACE Class 3 | 2%                                         | 15%              | 10%             | 15%                 | -20%                    | 30%  | 30% - 60% Design | 30% to 60%          |
|                     | 2 AACE Class 2 | 1%                                         | 10%              | 10%             | 10%                 | -20%                    | 20%  | 90% Design       | 60% to 95%          |
|                     | 1 AACE Class 1 | 0%                                         | 0%               | 10%             | 5%                  | -10%                    | 15%  | Final Design     | 95% to 100%         |

2. CO assigned value of 10% typical industry standard.

| Project Complexity | Preliminary and Alternate Evaluations | Geotechnical Evaluation and Engineering | Design Engineering | Permitting and Licenses | Environmental Planning and Management | Cultural Resource | Community Relations | Real Estate Support | Legal Support | Construction Management |
|--------------------|---------------------------------------|-----------------------------------------|--------------------|-------------------------|---------------------------------------|-------------------|---------------------|---------------------|---------------|-------------------------|
| N/A                | 0%                                    | 0%                                      | 0%                 | 0.0%                    | 0%                                    | 0.0%              | 0.0%                | 0.0%                | 0.0%          | 0.00%                   |
| Low                | 3%                                    | 2%                                      | 6%                 | 0.3%                    | 3%                                    | 0.5%              | 0.2%                | 0.3%                | 0.05%         | 5%                      |
| Routine            | 4%                                    | 3%                                      | 10%                | 0.5%                    | 4%                                    | 0.8%              | 0.4%                | 0.5%                | 0.10%         | 8%                      |
| Moderate           | 5%                                    | 4%                                      | 12%                | 1.0%                    | 5%                                    | 1.0%              | 0.5%                | 0.8%                | 0.15%         | 10%                     |
| High               | 6%                                    | 5%                                      | 15%                | 2.0%                    | 6%                                    | 2.0%              | 1.0%                | 1.5%                | 0.20%         | 12%                     |

Real estate costs estimated using Land value from Grays Harbor County Property assessor

| Parcel #     | Area       | Total Value   | \$/sf | Land value   | \$/sf   | Average \$/sf |
|--------------|------------|---------------|-------|--------------|---------|---------------|
| 34007000900  | 6766 \$    | 94,467.00 \$  | 13.96 | \$ 33,787.00 | \$ 4.99 |               |
| 34007001101  | 8393 \$    | 384,559.00 \$ | 45.82 | \$ 35,135.00 | \$ 4.19 |               |
| 34007101890  | 8674 \$    | 317,466.00 \$ | 36.60 | \$ 35,135.00 | \$ 4.05 |               |
| 34007100100  | 11490 \$   | 435,216.00 \$ | 37.88 | \$ 37,831.00 | \$ 3.29 | \$ 4.13       |
| 34006300100  | 10033.5 \$ | 223,131.00 \$ | 22.24 | \$ 35,809.00 | \$ 3.57 |               |
| 34006301700  | 11295 \$   | 215,429.00 \$ | 19.07 | \$ 37,831.00 | \$ 3.35 |               |
| 34006400900  | 7842 \$    | 155,014.00 \$ | 19.77 | \$ 34,349.00 | \$ 4.38 |               |
| 34006401100  | 11080 \$   | 309,626.00 \$ | 27.94 | \$ 37,831.00 | \$ 3.41 | \$ 3.68       |
| 34006200100  | 13231 \$   | 226,192.00 \$ | 17.10 | \$ 38,729.00 | \$ 2.93 |               |
| 34006201800  | 8512 \$    | 258,627.00 \$ | 30.38 | \$ 35,135.00 | \$ 4.13 |               |
| 34006301101  | 2558 \$    | 141,007.00 \$ | 55.12 | \$ 13,824.00 | \$ 5.40 |               |
| 34006300800  | 9162 \$    | 299,426.00 \$ | 32.68 | \$ 35,470.00 | \$ 3.87 | \$ 4.08       |
| 34006100102  | 6829 \$    | 150,406.00 \$ | 22.02 | \$ 22,423.00 | \$ 3.28 |               |
| 34006100101  | 4252 \$    | 11,345.00 \$  | 2.67  | \$ 11,345.00 | \$ 2.67 |               |
| 34006200802  | 4711 \$    | 383,879.00 \$ | 81.49 | \$ 27,072.00 | \$ 5.75 |               |
| 34006200801  | 5941 \$    | 214,352.00 \$ | 36.08 | \$ 23,520.00 | \$ 3.96 | \$ 3.91       |
| 417091541002 | 45166 \$   | 426,411.00 \$ | 9.44  | \$ 79,320.00 | \$ 1.76 |               |
| 34006100402  | 9994 \$    | 234,828.00 \$ | 23.50 | \$ 33,787.00 | \$ 3.38 | \$ 2.57       |

View Details

District Information

| General                     |                            | Ownership     |                   | Valuation      |          |
|-----------------------------|----------------------------|---------------|-------------------|----------------|----------|
| Property ID                 | 034006900100               | Owner         | MERTENS MELINDA   | Total Value    | \$34,421 |
| Map Number                  | 1709-14                    | Owner Address | 3817 E 9TH AVE    | Land Value     | \$34,421 |
| Legal Description           | R NIMS LOTS 1-5 INC BLK 69 |               | SPOKANE, WA 99202 | Building Value | \$0      |
| Land/Zoning                 |                            |               |                   |                |          |
| Area                        | 14,746.25                  |               |                   |                |          |
| Land Use Code & Description | 91 - Undeveloped - Land    |               |                   |                |          |

EST



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View Details District Information Print

| General                     |                                              | Ownership     |                  | Valuation      |          |
|-----------------------------|----------------------------------------------|---------------|------------------|----------------|----------|
| Property ID                 | 034007000900                                 | Owner         | JENSEN JENNIFER  | Total Value    | \$94,467 |
| Map Number                  | 1709-14                                      | Owner Address | PO BOX 5121      | Land Value     | \$33,787 |
| Address                     | 601 E ST                                     |               | EUREKA, CA 95502 | Building Value | \$60,680 |
| Legal Description           | R NIMS NWLY 1/2 OF LOT 8; LOTS 9 & 10 BLK 70 |               |                  |                |          |
| Land/Zoning                 |                                              |               |                  |                |          |
| Area                        | 6,766.34                                     |               |                  |                |          |
| Land Use Code & Description | 11 - Residential - Single Family             |               |                  |                |          |



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| General                     |                                          | Ownership     |                       | Valuation      |           |
|-----------------------------|------------------------------------------|---------------|-----------------------|----------------|-----------|
| Property ID                 | 034007001101                             | Owner         | CARLSON BRIAN & AMBER | Total Value    | \$384,559 |
| Map Number                  | 1709-14                                  | Owner Address | PO BOX 851            | Land Value     | \$35,135  |
| Address                     | 615 E ST                                 |               | COSMOPOLIS, WA 98537  | Building Value | \$349,424 |
| Legal Description           | R NIMS NELY 1/2 OF LOTS 11-16 INC BLK 70 |               |                       |                |           |
| Land/Zoning                 |                                          |               |                       |                |           |
| Area                        | 8,393.99                                 |               |                       |                |           |
| Land Use Code & Description | 11 - Residential - Single Family         |               |                       |                |           |



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| General                     |                                  | Ownership     |                                 | Valuation      |           |
|-----------------------------|----------------------------------|---------------|---------------------------------|----------------|-----------|
| Property ID                 | 034007101800                     | Owner         | MCGIVERON ROBERT J III & NICOLE | Total Value    | \$317,466 |
| Map Number                  | 1709-14                          | Owner Address | PO BOX 739                      | Land Value     | \$35,135  |
| Address                     | 616 E ST                         |               | COSMOPOLIS, WA 98537            | Building Value | \$282,331 |
| Legal Description           | R NIMS LOTS 18-20 INC BLK 71     |               |                                 |                |           |
| Land/Zoning                 |                                  |               |                                 |                |           |
| Area                        | 8,674.51                         |               |                                 |                |           |
| Land Use Code & Description | 11 - Residential - Single Family |               |                                 |                |           |

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View Details

District Information

Print

General

Property ID034007100100

Map Number1709-14

Address602 E ST

Legal DescriptionR NIMS LOTS 1-4 INC BLK 71

Land/Zoning

Area11,490.33

Land Use Code & Description11 - Residential - Single Family

Ownership

OwnerSMITH ROBERT L & KARLA K

Owner AddressPO BOX 556  
COSMOPOLIS, WA 98537

Valuation

Total Value\$435,216

Land Value\$37,831

Building Value\$397,385

F St

Keyboard shortcuts | Imagery ©2025 Airbus Maxar Technologies | 20 m |  | Terms | Report a map error

View Details

District Information

Print

General

Property ID034006300100

Map Number1709-14

Address504 F ST

Legal DescriptionR NIMS LOTS 1-3 INC TGV 10' VAC 5TH ST ADJ BLK 63

Land/Zoning

Area10,033.50

Land Use Code & Description11 - Residential - Single Family

Ownership

OwnerPARBON JOANN B

Owner AddressPO BOX 516  
COSMOPOLIS, WA 98537

Valuation

Total Value\$223,131

Land Value\$35,809

Building Value\$187,322

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## D.5 – E St Outfall



## PROJECT SUMMARY SHEET

|                                |                                                           |
|--------------------------------|-----------------------------------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-005                                          |
| <b>PROJECT NAME</b>            | F St. NE of 1st St. Flooding & E St. Outfall Improvements |
| <b>DATE</b>                    | 3/23/2026                                                 |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)                                        |
| <b>CC OR DISTRIBUTION LIST</b> | <a href="#">Click or tap here to enter text.</a>          |

### PROJECT DESCRIPTION

Persistent flooding is observed in the parking lot in 1025 1<sup>st</sup> St, Cosmopolis, WA 98537, near the E Street Outfall pipe. Several defects have been observed in stormwater pipes and maintenance holes immediately upstream of the outfall pipe.

This project includes replacing a collapsed stormwater pipe and wye connection where F street drainage pipes connect to the E Street Outfall pipe. To further reduce flooding in the area, the E Street Outfall pipe and several pipes upstream of the outfall will be upsized, and a maintenance hole will be replaced to increase inlet efficiency.

See Figure 1 for project location and existing stormwater pipes. See Figure 2 for example of flooding occurring in the parking lot.



Figure 1. E Street Outfall Upsize and Rehabilitation Overview



Figure 2. Flooding behind Mini Mart



## City of Cosmopolis | PROJECT CHARTER

### PROJECT COST

The opinion of probable construction cost (OPCC) for the project is approximately **\$2 million**. This project cost was developed in 2026 dollars, with a 2% inflation applied for each year until the project's assumed start year of 2036.

See the attached estimate for breakout of costs.

### PROBLEM STATEMENT

Persistent flooding is observed in the back parking lot of the Chevron gas station, located at 1025 1<sup>st</sup> St, Cosmopolis, WA 98537, near the E Street Outfall pipe. Video inspections have identified sag in the most upstream pipe reach and a collapse in the second pipe reach connecting from the parking lot catch basin to the E Street junction. These structural defects have contributed to standing water in the catch basin receiving flow from F Street.

This project includes replacing the pipes and the F Street catch basin in the parking lot. In order to further reduce flooding in the area, the E Street Outfall pipe will be upsized to a 36" RCP and the two pipe segments on E Street directly upstream of the outfall pipe will be upsized to 30" RCP.

### PROJECT GOALS

The project aims to eliminate flooding in the parking area and improve hydraulic efficiency of the connection to the outfall.

### PROJECT SCOPE

- Replace 975 LF of storm sewer pipes with (1) 490 LF of 12" pipe under parking lot, (2) 295 LF of 36" E Street Outfall, (3) 190 LF of 30" RCP on E Street.
- Replace the F Street catch basin in gas station parking lot with a Type 2 catch basin, typical of WSDOT details.
- Getting permanent easement for the outfall and storm lines that are on the Cosmo specialty fibers property.

### GEOTECHNICAL

According to NRCS Soil Survey, the predominant soil type is moderately well drained sandy loam. The general slope of the project area is between 0 to 2 percent. Given the shallow excavation depth, a trench box shoring system with 2:1 slope would be sufficient for this project.

The soil is expected to be unsuitable for reuse. A desktop analysis conducted in February 2026 identified nearby contaminated sites (Chevron parking lot and Cosmo Specialty Fibers). Further soil testing is recommended.

### UTILITIES

As-builts provided by the City were reviewed for potential utility conflicts within the project area. Sewer, water, and power relocations are anticipated as part of the project. A water main along E St and power poles and overhead utility relocation between F St and E St. The City believes there is a large sludge line running along the Chehalis River that crosses the Cosmo outfall storm drain. Utility

poles and overhead power lines are located within the project area, and underground power lines may be present.

### ANTICIPATED MAJOR PERMITS

State Environmental Policy Act (SEPA) review  
Hydraulic Project Approval from Washington Department of Fish and Wildlife  
Shoreline substantial development permit (SSDP)  
U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)  
Other local Grays Harbor County permits

### REAL ESTATE AND EASEMENT

Construction will occur within City ROW, Parcel No. 417091431002 owned by GMNGI LLC and Parcel No. 417091431003 owned by Cosmo Specialty Fibers inc. Temporary construction easements should be acquired for work on parcels and a permanent easement is recommended for the outfall. The majority of project area is owned by Cosmo Specialty fibers, which has been difficult to contact in the past. Coordination for these easements should start early in the design process.

### STAKEHOLDERS

| STAKEHOLDERS                     |                                                                                                                  |
|----------------------------------|------------------------------------------------------------------------------------------------------------------|
| NAME                             | INTEREST                                                                                                         |
| Business owners                  | Construction on their property, noise, dust and reduced parking area. Reduced flooding when project is complete. |
| Cosmo Specialty Fibers           | Outfall is located on Cosmo Property                                                                             |
| City of Cosmopolis O&M           | Less O&M burden on the city                                                                                      |
| Washington Department of Ecology | New outfall construction environmental regulations                                                               |
| Utility customers                | Service interruptions                                                                                            |
| Click or tap here to enter text. | Click or tap here to enter text.                                                                                 |
| Click or tap here to enter text. | Click or tap here to enter text.                                                                                 |

### ASSOCIATED PROJECTS

None.

## **ASSUMPTIONS, CONSTRAINTS, RISKS**

### **ASSUMPTIONS**

- Minimal utility conflicts/relocations
- No wetlands within project area
- Next to but not impacted by flood hazard area
- Adjacent to “high intensity” environmental shoreline designation
- Shallow excavation expected, 2:1 slope

### **RISKS AND CONSTRAINTS**

#### **Project Management Risk**

- Access/easement to work on Cosmo Specialty Fibers property
- Risk of contaminated soil
- Cultural resources may be encountered
- Multiple agency coordination could impact project schedule and cost
- Budget constraints or inflexibility due to grant funding.

#### **Project City Risk**

- Staff turnover could impact schedule

#### **Project Complexity Risk**

- QA/QC error or omission
- Regulatory changes, new regulations, and/or requirements
- Permitting challenges

### **OPPORTUNITIES**

Community Park along shoreline if property from Cosmo Specialty Fibers is acquired.

### **EXCLUSIONS**

N/A

| Estimate - AACE Class 5                                                                               |                                                                |          |       |                                                                  |              |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------|-------|------------------------------------------------------------------|--------------|
|                                                                                                       |                                                                |          |       | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |              |
| Agency:                                                                                               | City of Cosmopolis                                             |          |       | Estimator(s):                                                    |              |
| Project Name:                                                                                         | F Street/1st Street Flooding and E Street Outfall Improvements |          |       | Date Prepared:                                                   | 3/10/2026    |
| Location:                                                                                             | Northeast of F Street/1st Street to the E Street Outfall       |          |       | Version:                                                         | 1            |
| Description:                                                                                          | F Street/1st Street Flooding and E Street Outfall Improvements |          |       | Revision Date:                                                   | N/A          |
| DIRECT: SUBTOTAL CONSTRUCTION COSTS                                                                   |                                                                |          |       |                                                                  |              |
| Item No.                                                                                              | Item Description                                               | Quantity | Units | Unit Cost                                                        | Item Cost    |
|                                                                                                       | North of 1st Street Parking Lot Improvements                   | 1        | LS    | \$ 218,000                                                       | \$ 218,000   |
|                                                                                                       | E St. and 1st St. Improvements                                 | 1        | LS    | \$ 190,500                                                       | \$ 190,500   |
|                                                                                                       | E St. Outfall Improvements                                     | 1        | LS    | \$ 364,700                                                       | \$ 364,700   |
|                                                                                                       |                                                                |          |       |                                                                  | \$ -         |
|                                                                                                       |                                                                |          |       |                                                                  | \$ -         |
|                                                                                                       |                                                                |          |       |                                                                  | \$ -         |
|                                                                                                       |                                                                |          |       |                                                                  | \$ -         |
| Subtotal Construction Cost                                                                            |                                                                |          |       |                                                                  | \$ 773,200   |
| Allowance For Indeterminates (AFI)                                                                    |                                                                |          |       |                                                                  | \$ -         |
| Permits for Construction                                                                              |                                                                |          |       |                                                                  | \$ -         |
| ESTIMATED PROBABLE COST OF CONSTRUCTION BID                                                           |                                                                |          |       |                                                                  | \$ 773,200   |
| DIRECT: SUBTOTAL ADDITIONAL CONSTRUCTION COSTS                                                        |                                                                |          |       |                                                                  |              |
| Construction Change Order Allowance                                                                   |                                                                |          |       |                                                                  | \$ 77,320    |
| Material Pricing Uncertainty Allowance                                                                |                                                                |          |       |                                                                  | \$ -         |
| Construction Sales Tax                                                                                |                                                                |          |       |                                                                  | \$ 75,696    |
| Outside Agency Construction                                                                           |                                                                |          |       |                                                                  | \$ -         |
| Subtotal Additional Construction Costs                                                                |                                                                |          |       |                                                                  | \$ 153,016   |
| TOTAL DIRECT CONSTRUCTION COSTS                                                                       |                                                                |          |       |                                                                  | \$ 926,220   |
| INDIRECT: NON-CONSTRUCTION COSTS                                                                      |                                                                |          |       |                                                                  |              |
| Preliminary, Geotechnical, and Design Engineering                                                     |                                                                |          |       |                                                                  | \$ 129,671   |
| Environmental Planning, Management, Permitting & Licenses, Cultural Resource, and Community Relations |                                                                |          |       |                                                                  | \$ 75,950    |
| Real Estate, Easements, and ROW Costs                                                                 |                                                                |          |       |                                                                  | \$ 4,631     |
| Legal Support                                                                                         |                                                                |          |       |                                                                  | \$ 926       |
| Construction Management                                                                               |                                                                |          |       |                                                                  | \$ 74,098    |
| Other                                                                                                 |                                                                |          |       |                                                                  | \$ -         |
| TOTAL INDIRECT NON-CONSTRUCTION COSTS                                                                 |                                                                |          |       |                                                                  | \$ 285,280   |
| Contingency (Includes Risk Assessment Contingency)                                                    |                                                                |          |       |                                                                  | \$ 363,500   |
| TOTAL PROJECT COST (YEAR 2026)                                                                        |                                                                |          |       |                                                                  | \$ 1,575,000 |
| Inflation to Mid-year Construction                                                                    |                                                                |          |       |                                                                  | \$ 409,500   |
| ADJUSTED TOTAL PROJECT COST (YEAR 2038)                                                               |                                                                |          |       |                                                                  | \$ 1,984,500 |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2038                  |

| Base Year | Estimate Year |
|-----------|---------------|
| 2026      | 2026          |

| Base Year | Estimate Year |
|-----------|---------------|
| 2026      | 2026          |

| Estimate - AACE Class 5                   |                                                                     |          |        |                                                                 |                                                                  |
|-------------------------------------------|---------------------------------------------------------------------|----------|--------|-----------------------------------------------------------------|------------------------------------------------------------------|
| <b>Agency:</b>                            | City of Cosmopolis                                                  |          |        | <b>Estimator(s):</b>                                            | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| <b>Project Name:</b>                      | F Street/1st Street Flooding and E Street Outfall Improvements      |          |        | <b>Date Prepared:</b>                                           | 3/10/2026                                                        |
| <b>Location:</b>                          | Northeast of F Street/1st Street to the E Street Outfall            |          |        | <b>Version:</b>                                                 | 1                                                                |
| <b>Description:</b>                       | E St. to Outfall Improvements                                       |          |        | <b>Revision Date:</b>                                           | N/A                                                              |
| Item No.                                  | Item Description                                                    | Quantity | Units  | Unit Cost                                                       | Item Cost                                                        |
|                                           | <b>Conveyance Pipe &amp; Structures - Open Cut</b>                  |          |        |                                                                 | \$ -                                                             |
|                                           | 36" Diam. pipe                                                      | 295      | LF     | \$ 320                                                          | \$ 94,400                                                        |
|                                           | MH Allowance                                                        | 1        | EA     | \$ 21,000                                                       | \$ 21,000                                                        |
|                                           | Outfall Headwall, Bank Restoration and Stabilization Allowance      | 1        | LS     | \$ 70,000                                                       | \$ 70,000                                                        |
|                                           | Catch Basin & Connection Allowance                                  | 1        | LS     | \$ 8,000                                                        | \$ 8,000                                                         |
|                                           | Remove existing pipe > 12 in. to 30 in.                             | 295      | LF     | \$ 36                                                           | \$ 10,620                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Trench Excavation and Backfill</b>                               |          |        |                                                                 | \$ -                                                             |
|                                           | Pipe Diameter (Ft)                                                  | 3        | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation Width (1.5*ID+(1.5*Shoring Width))                | 7.0      | LF     |                                                                 | \$ -                                                             |
|                                           | Trench Depth (average)                                              | 8.0      | FT     |                                                                 | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | Groundwater Depth                                                   | 4.0      | FT     |                                                                 | \$ -                                                             |
|                                           | Contaminated Soil Depth                                             | 0        | FT     |                                                                 | \$ -                                                             |
|                                           | Shoring Width                                                       | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation, Incl. Haul                                       | 612      | CY     | \$ 55                                                           | \$ 33,652                                                        |
|                                           | Contaminated Soils Disposal (Handling & Disposal Fees - No Haul)    | 0        | CY     | \$ 165                                                          | \$ -                                                             |
|                                           | Contaminates Lab Testing Samples                                    | -        | EA     | \$ 1,500                                                        | \$ -                                                             |
|                                           | Imported Backfill                                                   | 535      | CY     | \$ 47                                                           | \$ 25,127                                                        |
|                                           | Trench Safety System (<10 feet)                                     | 295      | LF     | \$ 15                                                           | \$ 4,425                                                         |
|                                           | Trench Safety System (>10 feet)                                     | 0        | LF     | \$ 30                                                           | \$ -                                                             |
|                                           | Trench Dewatering System (GWT to 15' Deep Trench)                   | 295      | LF     | \$ 60                                                           | \$ 17,700                                                        |
|                                           | Trench Dewatering System Incl. Wellpoints (+15' to 24' Deep Trench) | 0        | LF     | \$ 260                                                          | \$ -                                                             |
|                                           | Trench Dewatering System Incl. Deep Well (+24' Deep Trench)         | 0        | LF     | \$ 930                                                          | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Utility Relocations</b>                                          |          |        |                                                                 | \$ -                                                             |
|                                           | Adjacent Utility Support                                            | 1        | LS     | \$ 1,000                                                        | \$ 1,000                                                         |
|                                           | Water - N/A                                                         |          |        |                                                                 | \$ -                                                             |
|                                           | Storm Drain - N/A                                                   |          |        |                                                                 | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Demolition and Removals</b>                                      |          |        |                                                                 | \$ -                                                             |
|                                           | Remove Existing Asphalt Pavement                                    | 426      | SY     | \$ 28                                                           | \$ 11,931                                                        |
|                                           | Remove and Replace Tree                                             | 2        | EA     | \$ 1,500                                                        | \$ 3,000                                                         |
|                                           | Clearing, Grubbing, and Seeded Restoration                          | 397      | SY     | \$ 28                                                           | \$ 11,122                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Road Restoration</b>                                             |          |        |                                                                 | \$ -                                                             |
|                                           | Pavement Trench Length                                              | 20       | FT     |                                                                 | \$ -                                                             |
|                                           | Pavement Removal Outside of Trench Exc. Width                       | 3        | FT     |                                                                 | \$ -                                                             |
|                                           | Road Restoration Width                                              | 13.0     | FT     |                                                                 | \$ -                                                             |
|                                           | Base Thickness                                                      | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | HMA Thickness                                                       | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Crushed Aggregate Base                                              | 9        | TN     | \$ 95                                                           | \$ 846                                                           |
|                                           | Road Restoration HMA                                                | 10       | TN     | \$ 230                                                          | \$ 2,270                                                         |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Traffic Control, TESC, Misc.</b>                                 |          |        |                                                                 | \$ -                                                             |
|                                           | Traffic Control                                                     | 1.0      | LS     | \$ 2,000                                                        | \$ 2,000                                                         |
|                                           | TESC @ 2% of Construction                                           | 2%       | LS     | \$ 317,094                                                      | \$ 6,342                                                         |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           |                                                                     |          |        | <b>Cost Subtotal</b>                                            | \$ 323,436                                                       |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b> |                                                                     |          |        |                                                                 |                                                                  |
|                                           | General Conditions                                                  | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Mobilization/Demobilization                                         | 10%      | 1.1    | \$                                                              | 32,344                                                           |
|                                           | Overhead & Profit (OHP)                                             | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Insurance                                                           | 1.5%     | 1.015  | \$                                                              | 5,337                                                            |
|                                           | Bonding                                                             | 1.0%     | 1.01   | \$                                                              | 3,611                                                            |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> | \$ 364,727                                                       |
|                                           | Escalation Multiplier from ENR-CCI                                  | 0%       | 0.0000 | \$                                                              | -                                                                |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              | \$ 364,727                                                       |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS</b>                              | \$ 364,700                                                       |

| Base Year | Estimate Year |
|-----------|---------------|
| 2026      | 2026          |

| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------|------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subtotal Construction Cost                                         |                  | \$ 773,200                                | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Mid-year Construction                                              | 2039             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Inflation                                                          | 2%               | 26%                                       | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | User input based on calculations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        | Provide comment if used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08%<br>Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Reference from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Outside Agency Construction                                        |                  | \$ -                                      | Utility locations are unknown at this time. This allowance for utility relocation has been covered in the individual cost estimate tab.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Real Estate and Right-of-Way Costs                                 |                  | \$ -                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | WSDOT Coordination may be required due to proximity to Hwy. Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Project Contingency                                                |                  | 30%                                       | Requires comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Risk Assessment Contingency                                        | 2.75             | 0%                                        | User input based on Risk Assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other                                                              |                  |                                           | Requires description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Preliminary and Alternative Design Evaluations                     | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Geotechnical Evaluation and Engineering                            | Moderate         | 4.0%                                      | Saturated soils with high groundwater, potential contamination due to proximity to ECY registered site and crossing railroad.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Design Engineering                                                 | Routine          | 10.0%                                     | Includes outfall replacement and potential for unknown connections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Permitting and Licenses                                            | High             | 2.0%                                      | Elevated due to proximity to Mill Creek with shorelines requirement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Environmental Planning and Management                              | Moderate         | 5.0%                                      | Potential contaminated soils near J Steet and 1st Street                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Cultural Resource                                                  | Moderate         | 1.0%                                      | Per DAHP WISSARD there is a high probability of encountering cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Community Relations                                                | Low              | 0.2%                                      | Low impact to general community.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Real Estate Support                                                | Routine          | 0.5%                                      | The project piping is located on private property owned by Cosmo Specialty Fiber and in the gas station parking lot. Permanent and temporary construction easements will be needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Legal Support                                                      | Routine          | 0.1%                                      | Legal support may be needed due to work on private property owned by Cosmo Specialty Fiber and in the gas station parking lot.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Construction Management                                            | Routine          | 8.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

Date: 3/9/2026  
 Project: F Street/1st Street Flooding and E Street Outfall Improvements  
 Prepared By: Xiating Chen

|             |   |   |   |   |
|-------------|---|---|---|---|
| Likelihood  | H | 3 | 4 | 5 |
|             | M | 2 | 3 | 4 |
|             | L | 1 | 2 | 3 |
| Consequence | L | M | H |   |

| Category                           | Number | Risk, Threat, or Opportunity                                                                                      | Comments                                                                                                  | Likelihood         | Consequence        | Risk Score | Strategy         | Risk Plan Proposed Mitigation                                                                                                                                                                                                                                               |
|------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------|--------------------|------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Add lines as needed for categories |        | List potential risk from drop down menu or manual entry                                                           | Give specific comments and notes regarding the risk.                                                      | Use drop down menu | Use drop down menu |            | Select from menu | Add description for proposed mitigation plan                                                                                                                                                                                                                                |
| Project Management Risk            | 1      | Cultural resources may be encountered                                                                             | Cosmopolis is in an area listed as high probability for encountering cultural resources on DAHP WISSARD   | Med                | Med                | 3          | Mitigate         | Obtain a cultural resource assessment near and at the outfall area during design. Consider setting new pipe alignment within the existing roadway to reduce the likelihood of encountering cultural resources during construction stage.                                    |
|                                    |        | Multiple agency coordination could impact project schedule and cost                                               | Work on the outfall will require Ecology, WDFW, USACE, and potentially Tribal, coordination.              | High               | Low                | 3          | Mitigate         | Identify agencies involved and initiate the permitting process early in design development. Set project design schedule to accommodate coordination and permitting in advance. Additional cost for coordination was added to the indirect input values.                     |
|                                    |        | Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.) | Mill Creek is salmon bearing. Set project schedule so outfall construction occurs within the fish window. | Med                | Med                | 3          | Mitigate         | Consider a design that keeps the existing storm line in service for as long as possible and install new storm pipe as separate dry pipe line, if feasible. This may reduce TESC costs and minimize construction constraints.                                                |
|                                    |        | Budget constraints or inflexibility                                                                               | Project funding may be from grant sources with limited flexibility for design and construction changes.   | Med                | High               | 4          | Avoid            | Design to evaluate costs and define costs in advance to minimize risk of added costs after funding has been procured.                                                                                                                                                       |
| Project City Team Risk             |        | Staff Turnover                                                                                                    | Schedule Delay, Changed Conditions                                                                        | Med                | Low                | 2          | Accept           |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
|                                    |        |                                                                                                                   |                                                                                                           |                    |                    | ---        |                  |                                                                                                                                                                                                                                                                             |
| Project Complexity Risk            |        | QA/QC Error or Omission                                                                                           | Potential schedule and cost impacts.                                                                      | Low                | Med                | 2          | Mitigate         | Implement QMP with QC reviews. Build time into the schedule for reviews.                                                                                                                                                                                                    |
|                                    |        | Regulatory changes, new regulations, and/or requirements                                                          | There may be storm or 404 permitting changes and new regulations implemented for work at the outfall.     |                    |                    | ---        | Mitigate         | Initiate the permitting process early in design development.                                                                                                                                                                                                                |
|                                    |        | Permitting challenges                                                                                             | Work on the outfall will require Ecology, WDFW, USACE, and potentially Tribal, coordination.              | High               | Low                | 3          | Accept           | Initiate permitting process early in the design phase to identify potential requirements.                                                                                                                                                                                   |
|                                    |        | Contaminated soils and environmental considerations                                                               | County property at NW corner of J St/4th St. intersection is a registered site with ECY.                  | Low                | Med                | 2          | Mitigate         | Review ECY documentation on County property and recommend geotechnical testing in pipe alignment at this intersection in advance of construction. Costs were added to the geotechnical input and an allowance was added to the estimate to address potential contamination. |

Project Risk Assessment Score 2.75

When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added

Input tables used for drop down columns on the risk register

| Risk, Threats, or Opportunities                                                                                            | Likelihood | Consequence | Action   |
|----------------------------------------------------------------------------------------------------------------------------|------------|-------------|----------|
| <Type in or select from the list>                                                                                          | Low        | Low         | Accept   |
| Limited available staff and staff workload                                                                                 | Med        | Med         | Mitigate |
| Health and safety accident concerns                                                                                        | High       | High        | Transfer |
| Traffic impacts and delays                                                                                                 |            |             | Avoid    |
| Multiple agency coordination could impact project schedule and cost                                                        |            |             |          |
| Legal or regulatory special risk & challenges                                                                              |            |             |          |
| Regulatory changes, new regulations, and/or requirements                                                                   |            |             |          |
| Permitting challenges                                                                                                      |            |             |          |
| Sensitive Location (Park, near public schools, proximity to downtown or business areas, etc.)                              |            |             |          |
| Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.)          |            |             |          |
| Objections or opposition to the project                                                                                    |            |             |          |
| Cultural resources may be encountered                                                                                      |            |             |          |
| Unknown geotechnical and subsurface conditions (e.g.. groundwater)                                                         |            |             |          |
| Contaminated soils and environmental considerations                                                                        |            |             |          |
| Objectives and/or requirements are unclear                                                                                 |            |             |          |
| Additional scope changes may affect cost and schedule                                                                      |            |             |          |
| Unknown or changing site conditions                                                                                        |            |             |          |
| Unknown utilities and conflicts may affect project scope and cost                                                          |            |             |          |
| Site real estate or right-of-way procurement difficulties                                                                  |            |             |          |
| Weather conditions may negatively impact project schedule and cost                                                         |            |             |          |
| Affects customer utility services or requires service outages                                                              |            |             |          |
| Supply chain shortages and/or material cost increases                                                                      |            |             |          |
| Complex project and constructability issues may result in major design or construction changes                             |            |             |          |
| QA/QC Error or Omission                                                                                                    |            |             |          |
| Budget constraints or inflexibility                                                                                        |            |             |          |
| Staff Turnover                                                                                                             |            |             |          |
| There is an opportunity for enhanced engineering development and value engineering alternatives to reduce estimated costs. |            |             |          |

Association for the Advancement of Cost Engineering (AACE) International

Expected Accuracy Range

| AACE Estimate Class | Class Number | Construction Pricing Uncertainty Allowance | AFI <sup>1</sup> | CO <sup>2</sup> | Project Contingency | Low  | High | Design Phase     | Level of Definition |
|---------------------|--------------|--------------------------------------------|------------------|-----------------|---------------------|------|------|------------------|---------------------|
| 5                   | AACE Class 5 | 5%                                         | 0%               | 10%             | 30%                 | -50% | 100% | Planning         | 0% to 2%            |
| 4                   | AACE Class 4 | 3%                                         | 0%               | 10%             | 25%                 | -30% | 50%  | Pre-design       | 1% to 30%           |
| 3                   | AACE Class 3 | 2%                                         | 15%              | 10%             | 15%                 | -20% | 30%  | 30% - 60% Design | 30% to 60%          |
| 2                   | AACE Class 2 | 1%                                         | 10%              | 10%             | 10%                 | -20% | 20%  | 90% Design       | 60% to 95%          |
| 1                   | AACE Class 1 | 0%                                         | 0%               | 10%             | 5%                  | -10% | 15%  | Final Design     | 95% to 100%         |

1. Allowance for Indeterminates (AFI) is an estimated cost to address unknowns that cannot be accurately quantified during the design phases. Recommended values per City of Bellevue Cost Estimating Guidelines. AFI typically not added in early project stages. The stages have a contingency amount for project costs.

2. CO assigned value of 10% typical industry standard.

| Project Complexity | Preliminary and Alternate Evaluations | Geotechnical Evaluation and Engineering | Design Engineering | Permitting and Licenses | Environmental Planning and Management | Cultural Resource | Community Relations | Real Estate Support | Legal Support | Construction Management |
|--------------------|---------------------------------------|-----------------------------------------|--------------------|-------------------------|---------------------------------------|-------------------|---------------------|---------------------|---------------|-------------------------|
| N/A                | 0%                                    | 0%                                      | 0%                 | 0.0%                    | 0%                                    | 0.0%              | 0.0%                | 0.0%                | 0.0%          | 0.00%                   |
| Low                | 3%                                    | 2%                                      | 6%                 | 0.3%                    | 3%                                    | 0.5%              | 0.2%                | 0.3%                | 0.05%         | 5%                      |
| Routine            | 4%                                    | 3%                                      | 10%                | 0.5%                    | 4%                                    | 0.8%              | 0.4%                | 0.5%                | 0.10%         | 8%                      |
| Moderate           | 5%                                    | 4%                                      | 12%                | 1.0%                    | 5%                                    | 1.0%              | 0.5%                | 0.8%                | 0.15%         | 10%                     |
| High               | 6%                                    | 5%                                      | 15%                | 2.0%                    | 6%                                    | 2.0%              | 1.0%                | 1.5%                | 0.20%         | 12%                     |

## D.6 – 2nd St Outfall

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## PROJECT SUMMARY SHEET

|                                |                                                          |
|--------------------------------|----------------------------------------------------------|
| <b>CIP PROJECT NUMBER</b>      | COSI-SW-2026-006                                         |
| <b>PROJECT NAME</b>            | J St. at 4th St. Flooding & 2nd St. Outfall Improvements |
| <b>DATE</b>                    | 3/23/2026                                                |
| <b>PREPARED BY</b>             | Xiating Chen (HDR)                                       |
| <b>CC OR DISTRIBUTION LIST</b> | Click or tap here to enter text.                         |

### PROJECT DESCRIPTION

Persistent flooding is observed at the intersection of J Street and 4<sup>th</sup> Street. This may be caused by undersized pipes and backwatered condition at the 2<sup>nd</sup> Street outfall, where the outfall discharge elevation is controlled by the tide gate to Chehalis River. Preliminary hydraulic modeling analysis observed capacity constraints in upstream 2<sup>nd</sup> Street basin when the tide gate is staged at 6 feet.

A tide gate study is needed to determine 2<sup>nd</sup> Street basin's sensitivity to tide gate elevation.

See Figure 1 for project location and existing stormwater pipes. See Figure 2 for example of flooding in the streets at 4<sup>th</sup> and I Street.



## City of Cosmopolis | PROJECT CHARTER



Figure 1. 2<sup>nd</sup> Street Outfall Basin and Facility Map



**Figure 2. Flooding at 4th and I St Intersection**



### PROJECT COST

The opinion of probable construction cost (OPCC) for the project is approximately **\$3.4 million**. This project cost was developed in 2026 dollars, with a 2% inflation applied for each year until the project's assumed start year of 2036.

See the attached estimate for breakout of costs.

### PROBLEM STATEMENT

Persistent flooding is observed at a sag point at the intersection of J Street and 2<sup>nd</sup> Street in Cosmopolis, WA. The flooding could be contributed by a combination of undersized pipes and backwatered condition due to tidal gate. There are no known structural defects to the existing system.

This project includes replacing and upsizing pipes along J Street, from the 2<sup>nd</sup> Street outfall up to 4<sup>th</sup> Street. In order to further reduce flooding at the sag on 4<sup>th</sup> and J Streets, a new inlet catch basin would be added to improve drainage efficiency.

Related to this capital improvement project, a separate tide gate study is recommended to evaluate the 2<sup>nd</sup> Street system's sensitivity to tidal gate stage level. A preliminary modeling analysis has shown relief in the conveyance system when the downstream water surface elevation is lowered from 6 feet to 4 feet.

### PROJECT GOALS

The project aims to eliminate flooding at the intersection of 4<sup>th</sup> and J Streets.

### PROJECT SCOPE

1. Upsize 503 LF of 30-inch pipe from 2<sup>nd</sup> St and J St to outfall.
2. Upsize 671 LF of 18-inch pipe on J St from 2<sup>nd</sup> St to 4<sup>th</sup> St.
3. Add catch basin at the intersection of J St and 4<sup>th</sup> St.

### GEOTECHNICAL

According to NRCS Soil Survey, the predominant soil type is moderately well drained sandy loam. The general slope of the project area is between 0 to 2 percent. Given the shallow excavation depth, a trench box shoring system with 2:1 slope would be sufficient for this project.

The soil is expected to be unsuitable for reuse.

### UTILITIES

As-builts provided by the City were reviewed for potential utility conflicts within the project area. Water main as-builts showed 980 LF of 8-inch water mainlines run parallel to the stormwater pipes along J St. Although these 8-inch mains do not cross stormwater pipes, the 6-inch service lines and valves at the crossings between J Street and 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Streets need to be replaced. Sewer as-builts indicate pipe crossing at the intersection of J Street and 3<sup>rd</sup> and 4<sup>th</sup> Streets.

Utility poles and overhead power lines are located within the project area, and underground power lines may be present.

### ANTICIPATED MAJOR PERMITS

State Environmental Policy Act (SEPA) review  
Hydraulic Project Approval from Washington Department of Fish and Wildlife  
Shoreline substantial development permit (SSDP)  
U.S. Army Corps of Engineers Section 404 permit (Rivers & Harbors Act) and Section 10 permit (Clean Water Act)  
Other local Grays Harbor County permits

### REAL ESTATE AND EASEMENT

Construction will occur largely within City ROW along J St and 2<sup>nd</sup> St. The outfall pipe will require construction on Parcel No. 417091423004 owned by the Cosmopolis Lion Club.

### STAKEHOLDERS

| STAKEHOLDERS                     |                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------|
| NAME                             | INTEREST                                                                                        |
| Cosmopolis residents             | Construction noise, dust, and traffic interruptions. Reduced flooding when project is complete. |
| Cosmopolis Lions Club            | Outfall is located on Cosmopolis Lions Club Property                                            |
| City of Cosmopolis O&M           | Less O&M burden on the city                                                                     |
| Washington Department of Ecology | New outfall construction environmental regulations                                              |
| Utility customers                | Service interruptions                                                                           |
| Click or tap here to enter text. | Click or tap here to enter text.                                                                |
| Click or tap here to enter text. | Click or tap here to enter text.                                                                |

### ASSOCIATED PROJECTS

COSI-SW-2026-001 Mill Creek Tide Gate Study

COSI-SW-2026-002 Mill Creek Tide Gate Improvements

## **ASSUMPTIONS, CONSTRAINTS, RISKS**

### **ASSUMPTIONS**

- No wetlands within project area
- Next to but not impacted by flood hazard area
- Adjacent to “high intensity” environmental shoreline designation
- No contaminated soils handling or disposal

### **RISKS AND CONSTRAINTS**

#### **Project Management Risk**

- Access/easement to work on Cosmo Specialty Fibers property
- Cultural resources may be encountered
- Multiple agency coordination could impact project schedule and cost
- Budget constraints or inflexibility due to grant funding.

#### **Project City Risk**

- Staff turnover could impact schedule

#### **Project Complexity Risk**

- QA/QC error or omission
- Regulatory changes, new regulations, and/or requirements
- Permitting challenges

### **OPPORTUNITIES**

N/A

### **EXCLUSIONS**

N/A

| Estimate - AACE Class 5                                                                               |                                                                |          |       |                |                                                                  |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------|-------|----------------|------------------------------------------------------------------|
| Agency:                                                                                               | City of Cosmopolis                                             |          |       | Estimator(s):  | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| Project Name:                                                                                         | J St. at 4th St. Flooding & 2nd St. Outfall Improvements       |          |       | Date Prepared: | 3/10/2026                                                        |
| Location:                                                                                             | Southwest of J Street and 1th Street to the 2nd Street Outfall |          |       | Version:       | 1                                                                |
| Description:                                                                                          | J St. at 4th St. Flooding & 2nd St. Outfall Improvements       |          |       | Revision Date: | N/A                                                              |
| DIRECT: SUBTOTAL CONSTRUCTION COSTS                                                                   |                                                                |          |       |                |                                                                  |
| Item No.                                                                                              | Item Description                                               | Quantity | Units | Unit Cost      | Item Cost                                                        |
| 1                                                                                                     | J St. to 2nd St. Conveyance and Outfall Improvements           | 1        | LS    | \$ 744,200     | \$ 744,200                                                       |
| 2                                                                                                     | J Street and 1st St. Improvements                              | 1        | LS    | \$ 596,200     | \$ 596,200                                                       |
|                                                                                                       |                                                                |          |       |                | \$ -                                                             |
|                                                                                                       |                                                                |          |       |                | \$ -                                                             |
|                                                                                                       |                                                                |          |       |                | \$ -                                                             |
|                                                                                                       |                                                                |          |       |                | \$ -                                                             |
|                                                                                                       |                                                                |          |       |                | \$ -                                                             |
| Subtotal Construction Cost                                                                            |                                                                |          |       |                | \$ 1,340,400                                                     |
| Allowance For Indeterminates (AFI)                                                                    |                                                                |          |       |                | \$ -                                                             |
| Permits for Construction                                                                              |                                                                |          |       |                | \$ -                                                             |
| ESTIMATED PROBABLE COST OF CONSTRUCTION BID                                                           |                                                                |          |       |                | \$ 1,340,400                                                     |
| DIRECT: SUBTOTAL ADDITIONAL CONSTRUCTION COSTS                                                        |                                                                |          |       |                |                                                                  |
| Construction Change Order Allowance                                                                   |                                                                |          |       |                | \$ 134,040                                                       |
| Material Pricing Uncertainty Allowance                                                                |                                                                |          |       |                | \$ -                                                             |
| Construction Sales Tax                                                                                |                                                                |          |       |                | \$ 131,225                                                       |
| Outside Agency Construction                                                                           |                                                                |          |       |                | \$ 5,000                                                         |
| Subtotal Additional Construction Costs                                                                |                                                                |          |       |                | \$ 270,265                                                       |
| TOTAL DIRECT CONSTRUCTION COSTS                                                                       |                                                                |          |       |                | \$ 1,610,670                                                     |
| INDIRECT: NON-CONSTRUCTION COSTS                                                                      |                                                                |          |       |                |                                                                  |
| Preliminary, Geotechnical, and Design Engineering                                                     |                                                                |          |       |                | \$ 225,494                                                       |
| Environmental Planning, Management, Permitting & Licenses, Cultural Resource, and Community Relations |                                                                |          |       |                | \$ 115,968                                                       |
| Real Estate, Easements, and ROW Costs                                                                 |                                                                |          |       |                | \$ -                                                             |
| Legal Support                                                                                         |                                                                |          |       |                | \$ -                                                             |
| Construction Management                                                                               |                                                                |          |       |                | \$ 128,854                                                       |
| Other                                                                                                 |                                                                |          |       |                | \$ -                                                             |
| TOTAL INDIRECT NON-CONSTRUCTION COSTS                                                                 |                                                                |          |       |                | \$ 470,320                                                       |
| Contingency (Includes Risk Assessment Contingency)                                                    |                                                                |          |       |                | \$ 624,300                                                       |
| TOTAL PROJECT COST (YEAR 2026)                                                                        |                                                                |          |       |                | \$ 2,705,300                                                     |
| Inflation to Mid-year Construction                                                                    |                                                                |          |       |                | \$ 703,378                                                       |
| ADJUSTED TOTAL PROJECT COST (YEAR 2040)                                                               |                                                                |          |       |                | \$ 3,408,700                                                     |

| Estimate Year | Mid-Construction Year |
|---------------|-----------------------|
| 2026          | 2040                  |

| Estimate - AACE Class 5                   |                                                                     |          |        |                                                                 |                                                                  |
|-------------------------------------------|---------------------------------------------------------------------|----------|--------|-----------------------------------------------------------------|------------------------------------------------------------------|
| <b>Agency:</b>                            | City of Cosmopolis                                                  |          |        | <b>Estimator(s):</b>                                            | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| <b>Project Name:</b>                      | J St. at 4th St. Flooding & 2nd St. Outfall Improvements            |          |        | <b>Date Prepared:</b>                                           | 3/10/2026                                                        |
| <b>Location:</b>                          | Southwest of J Street and 1th Street to the 2nd Street Outfall      |          |        | <b>Version:</b>                                                 | 1                                                                |
| <b>Description:</b>                       | J Street to 2nd St. Outfall                                         |          |        | <b>Revision Date:</b>                                           | N/A                                                              |
| Item No.                                  | Item Description                                                    | Quantity | Units  | Unit Cost                                                       | Item Cost                                                        |
| 1                                         | <b>Conveyance Pipe &amp; Structures - Open Cut</b>                  |          |        |                                                                 | \$ -                                                             |
|                                           | 30" Diam. pipe                                                      | 505      | LF     | \$ 280                                                          | \$ 141,400                                                       |
|                                           | MH Allowance                                                        | 4        | EA     | \$ 21,000                                                       | \$ 84,000                                                        |
|                                           | Outfall Headwall, Bank Restoration and Stabilization Allowance      | 1        | LS     | \$ 70,000                                                       | \$ 70,000                                                        |
|                                           | Catch Basin & Connection Allowance                                  | 1        | LS     | \$ 12,000                                                       | \$ 12,000                                                        |
|                                           | Plug and abandon Existing Storm Main Allowance                      | 300      | LF     | \$ 40                                                           | \$ 12,000                                                        |
|                                           | Remove Existing Pipe >12 In. to 30 In.                              | 205      | LF     | \$ 70                                                           | \$ 14,350                                                        |
|                                           | Reconnect Existing Catch basins to new main                         | 10       | EA     | \$ 8,000                                                        | \$ 80,000                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Trench Excavation and Backfill</b>                               |          |        |                                                                 | \$ -                                                             |
|                                           | Pipe Diameter (Ft)                                                  | 2.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation Width (1.5*ID+(1.5*Shoring Width))                | 6.3      | LF     |                                                                 | \$ -                                                             |
|                                           | Trench Depth (average)                                              | 8.0      | FT     |                                                                 | \$ -                                                             |
|                                           | Groundwater Depth                                                   | 4.0      | FT     |                                                                 | \$ -                                                             |
|                                           | Contaminated Soil Depth                                             | 0.0      | FT     |                                                                 | \$ -                                                             |
|                                           | Shoring Width                                                       | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation, Incl. Haul                                       | 935      | CY     | \$ 55                                                           | \$ 51,435                                                        |
|                                           | Contaminated Soils Disposal (Handling & Disposal Fees - No Haul)    | 0        | CY     | \$ 165                                                          | \$ -                                                             |
|                                           | Contaminates Lab Testing Samples                                    | -        | EA     | \$ 1,500                                                        | \$ -                                                             |
|                                           | Imported Backfill, Incl. Haul                                       | 843      | CY     | \$ 47                                                           | \$ 39,639                                                        |
|                                           | Trench Safety System (<10 feet)                                     | 505      | LF     | \$ 20                                                           | \$ 10,100                                                        |
|                                           | Trench Safety System (>10 feet)                                     | 0        | LF     | \$ 60                                                           | \$ -                                                             |
|                                           | Trench Dewatering System (GWT to 15' Deep Trench)                   | 505      | LF     | \$ 60                                                           | \$ 30,300                                                        |
|                                           | Trench Dewatering System Incl. Wellpoints (+15' to 24' Deep Trench) | 0        | LF     | \$ 260                                                          | \$ -                                                             |
|                                           | Trench Dewatering System Incl. Deep Well (+24' Deep Trench)         | 0        | LF     | \$ 930                                                          | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Utility Relocations</b>                                          |          |        |                                                                 | \$ -                                                             |
|                                           | Adjacent Utility Support                                            | 1        | LS     | \$ 2,000                                                        | \$ 2,000                                                         |
|                                           | Unknown Utility Relocation Allowance                                | 1        | LS     | \$ 20,000                                                       | \$ 20,000                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Demolition and Removals</b>                                      |          |        |                                                                 | \$ -                                                             |
|                                           | Remove Existing Asphalt Pavement                                    | 321      | SY     | \$ 28                                                           | \$ 8,983                                                         |
|                                           | Remove Cement Concrete Sidewalk and Driveway                        | 194      | SY     | \$ 28                                                           | \$ 5,444                                                         |
|                                           | Remove and Replace Tree                                             | 0        | EA     | \$ 950                                                          | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Road Restoration</b>                                             |          |        |                                                                 | \$ -                                                             |
|                                           | Pavement Trench Length                                              | 350      | LF     |                                                                 | \$ -                                                             |
|                                           | Pavement Removal Outside of Trench Exc. Width                       | 1        | FT     |                                                                 | \$ -                                                             |
|                                           | Road Restoration Width                                              | 8.3      | FT     |                                                                 | \$ -                                                             |
|                                           | Base Thickness                                                      | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | HMA Thickness                                                       | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Crushed Aggregate Base                                              | 99       | TN     | \$ 95                                                           | \$ 9,398                                                         |
|                                           | Parking lot Restoration HMA                                         | 110      | TN     | \$ 230                                                          | \$ 25,212                                                        |
|                                           | Sidewalk Restoration, 5' wide                                       | 194      | SY     | \$ 110                                                          | \$ 21,389                                                        |
|                                           | Upgrade Pedestrian Crossings to ADA                                 | 2        | EA     | \$ 9,675                                                        | \$ 19,350                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Traffic Control, TESC, Misc.</b>                                 |          |        |                                                                 | \$ -                                                             |
|                                           | Traffic Control                                                     | 1.0      | LS     | \$ 2,000                                                        | \$ 2,000                                                         |
|                                           | TESC @ 2% of Construction                                           | 2%       | LS     | \$ 659,000                                                      | \$ 13,180                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           |                                                                     |          |        | <b>Cost Subtotal</b>                                            | \$ 672,180                                                       |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b> |                                                                     |          |        |                                                                 |                                                                  |
|                                           | General Conditions                                                  | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Mobilization/Demobilization                                         | 8%       | 1.08   | \$                                                              | 53,774                                                           |
|                                           | Overhead & Profit (OHP)                                             | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Insurance                                                           | 1.5%     | 1.015  | \$                                                              | 10,889                                                           |
|                                           | Bonding                                                             | 1.0%     | 1.01   | \$                                                              | 7,368                                                            |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> | \$ 744,212                                                       |
|                                           | Escalation Multiplier from ENR-CCI                                  | 0%       | 0.0000 | \$                                                              | -                                                                |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              | \$ 744,212                                                       |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS</b>                              | \$ 744,200                                                       |

| Estimate - AACE Class 5                   |                                                                     |          |        |                                                                 |                                                                  |
|-------------------------------------------|---------------------------------------------------------------------|----------|--------|-----------------------------------------------------------------|------------------------------------------------------------------|
| <b>Agency:</b>                            | City of Cosmopolis                                                  |          |        | <b>Estimator(s):</b>                                            | Xiating Chen (HDR)<br>Jess Dexheimer (HDR)<br>Cindy Kinzer (HDR) |
| <b>Project Name:</b>                      | J St. at 4th St. Flooding & 2nd St. Outfall Improvements            |          |        | <b>Date Prepared:</b>                                           | 3/10/2026                                                        |
| <b>Location:</b>                          | Southwest of J Street and 1th Street to the 2nd Street Outfall      |          |        | <b>Version:</b>                                                 | 1                                                                |
| <b>Description:</b>                       | J Street to 2nd St. Outfall                                         |          |        | <b>Revision Date:</b>                                           | N/A                                                              |
| Item No.                                  | Item Description                                                    | Quantity | Units  | Unit Cost                                                       | Item Cost                                                        |
| 1                                         | <b>Conveyance Pipe &amp; Structures - Open Cut</b>                  |          |        |                                                                 | \$ -                                                             |
|                                           | 18" Diam. pipe                                                      | 675      | LF     | \$ 180                                                          | \$ 121,500                                                       |
|                                           | MH Allowance                                                        | 4        | EA     | \$ 9,500                                                        | \$ 38,000                                                        |
|                                           | Catch Basin & Connection Allowance                                  | 1        | LS     | \$ 12,000                                                       | \$ 12,000                                                        |
|                                           | Plug and abandon Existing Storm Main Allowance                      | 675      | LF     | \$ 40                                                           | \$ 27,000                                                        |
|                                           | Reconnect Existing Catch basins to new main                         | 6        | EA     | \$ 8,000                                                        | \$ 48,000                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Trench Excavation and Backfill</b>                               |          |        |                                                                 | \$ -                                                             |
|                                           | Pipe Diameter (Ft)                                                  | 2        | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation Width (1.5 * ID + (1.5 * Shoring Width))          | 5.8      | LF     |                                                                 | \$ -                                                             |
|                                           | Trench Depth (average)                                              | 7.9      | FT     |                                                                 | \$ -                                                             |
|                                           | Groundwater Depth                                                   | 8.0      | FT     |                                                                 | \$ -                                                             |
|                                           | Contaminated Soil Depth                                             | 5        | FT     |                                                                 | \$ -                                                             |
|                                           | Shoring Width                                                       | 1        | FT     |                                                                 | \$ -                                                             |
|                                           | Trench Excavation, Incl. Haul                                       | 1,136    | CY     | \$ 55                                                           | \$ 62,459                                                        |
|                                           | Contaminated Soils Disposal (Handling & Disposal Fees - No Haul)    | 106      | CY     | \$ 165                                                          | \$ 17,569                                                        |
|                                           | Contaminates Lab Testing Samples                                    | 1        | EA     | \$ 1,500                                                        | \$ 1,500                                                         |
|                                           | Imported Backfill                                                   | 1,091    | CY     | \$ 47                                                           | \$ 51,298                                                        |
|                                           | Trench Safety System (<10 feet)                                     | 675      | LF     | \$ 20                                                           | \$ 13,500                                                        |
|                                           | Trench Safety System (>10 feet)                                     | 0        | LF     | \$ 60                                                           | \$ -                                                             |
|                                           | Trench Dewatering System (GWT to 15' Deep Trench)                   | 0        | LF     | \$ 60                                                           | \$ -                                                             |
|                                           | Trench Dewatering System Incl. Wellpoints (+15' to 24' Deep Trench) | 0        | LF     | \$ 260                                                          | \$ -                                                             |
|                                           | Trench Dewatering System Incl. Deep Well (+24' Deep Trench)         | 0        | LF     | \$ 930                                                          | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Utility Relocations</b>                                          |          |        |                                                                 | \$ -                                                             |
|                                           | Adjacent Utility Support                                            | 1        | LS     | \$ 2,000                                                        | \$ 2,000                                                         |
|                                           | Unknown Utility Relocation Allowance                                | 1        | LS     | \$ 10,000                                                       | \$ 10,000                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Demolition and Removals</b>                                      |          |        |                                                                 | \$ -                                                             |
|                                           | Remove Existing Asphalt Pavement                                    | 172      | SY     | \$ 28                                                           | \$ 4,822                                                         |
|                                           | Remove Cement Concrete Sidewalk and Driveway                        | 383      | SY     | \$ 28                                                           | \$ 10,733                                                        |
|                                           | Remove and Replace Tree                                             | 0        | EA     | \$ 950                                                          | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Road Restoration/Improvements</b>                                |          |        |                                                                 | \$ -                                                             |
|                                           | Pavement Trench Length                                              | 675      | LF     |                                                                 | \$ -                                                             |
|                                           | Pavement Removal Outside of Trench Exc. Width                       | 1        | FT     |                                                                 | \$ -                                                             |
|                                           | Road Restoration Width                                              | 7.8      | FT     |                                                                 | \$ -                                                             |
|                                           | Base Thickness                                                      | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | HMA Thickness                                                       | 0.5      | FT     |                                                                 | \$ -                                                             |
|                                           | Crushed Aggregate Base                                              | 179      | TN     | \$ 95                                                           | \$ 17,026                                                        |
|                                           | Parking lot Restoration HMA                                         | 0        | TN     | \$ 230                                                          | \$ -                                                             |
|                                           | Sidewalk, 5' wide                                                   | 383      | SY     | \$ 110                                                          | \$ 42,167                                                        |
|                                           | Upgrade Pedestrian Crossings to ADA                                 | 5        | EA     | \$ 9,675                                                        | \$ 48,375                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           | <b>Traffic Control, TESC, Misc.</b>                                 |          |        |                                                                 | \$ -                                                             |
|                                           | Traffic Control                                                     | 0.0      | LS     | \$ 6,000                                                        | \$ -                                                             |
|                                           | TESC @ 2% of Construction                                           | 2%       | LS     | \$ 527,950                                                      | \$ 10,559                                                        |
|                                           |                                                                     |          |        |                                                                 | \$ -                                                             |
|                                           |                                                                     |          |        |                                                                 |                                                                  |
|                                           |                                                                     |          |        | <b>Cost Subtotal</b>                                            | \$ 538,509                                                       |
| <b>DIRECT: CONSTRUCTION COST MARK-UPS</b> |                                                                     |          |        |                                                                 |                                                                  |
|                                           | General Conditions                                                  | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Mobilization/Demobilization                                         | 8%       | 1.08   | \$                                                              | 43,081                                                           |
|                                           | Overhead & Profit (OHP)                                             | 0%       | 1      | \$                                                              | -                                                                |
|                                           | Insurance                                                           | 1.5%     | 1.015  | \$                                                              | 8,724                                                            |
|                                           | Bonding                                                             | 1.0%     | 1.01   | \$                                                              | 5,903                                                            |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS WITH MARKUPS IN 2026 DOLLARS</b> | \$ 596,216                                                       |
|                                           | Escalation Multiplier from ENR-CCI                                  | 0%       | 0.0000 | \$                                                              | -                                                                |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS IN 2026 DOLLARS</b>              | \$ 596,216                                                       |
|                                           |                                                                     |          |        | <b>SUBTOTAL CONSTRUCTION COSTS</b>                              | \$ 596,200                                                       |

| ESTIMATE INPUT TABLE                                               |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------|------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Category                                                     | Inputs           | Value                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Select Estimate Class                                              | AACE Class 5     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Subtotal Construction Cost                                         |                  | \$ 1,340,400                              | Calculated on Project Cost Summary sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Estimate Year                                                      | 2026             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mid-year Construction                                              | 2039             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Inflation                                                          | 2%               | 26%                                       | Inflation rate applied to Total Project Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ADDITIONAL CONSTRUCTION COSTS                                      |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Allowance for Indeterminates (AFI)                                 |                  | 0%                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Permits for Construction (e.g. street use, building permits, etc.) |                  | \$ -                                      | User input based on calculations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| OTHER CAPITAL CHARGES                                              |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Construction Change Order Allowance                                |                  | 10%                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Material Pricing Uncertainty Allowance                             |                  | 0%                                        | Provide comment if used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Construction Sales Tax                                             |                  | 8.90%                                     | Look up Value by Agency at: <a href="https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf">https://dor.wa.gov/sites/default/files/2025-05/LSU_flyer_Q3_25.pdf</a> Aberdeen 9.08%<br>Cosmopolis 8.9%, Hoquiam 8.9%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Sales Tax Rule 171 Credit                                          |                  | \$ -                                      | Unless certain, recommend keeping sales tax for Class 5 & Class 4 estimates. Referece from WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work. |
| Outside Agency Construction                                        |                  | \$ 5,000                                  | Utility locations are unknown at this time. An allowance is provided to address potential relocations required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| INDIRECT PROJECT COST AND COMPLEXITY FACTORS                       |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Real Estate and Right-of-Way Costs                                 |                  | \$ -                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Outside Agency Coordination (Work in ROW)                          |                  | \$ -                                      | WSDOT Coordination may be required due to proximity to Hwy. Provide comment if used. Addresses costs for coordination with outside agencies for work in their ROW (e.g. WSDOT, County, other City/agency, etc.) is needed. Note: costs will be combined with Real Estate and ROW costs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Project Contingency                                                |                  | 30%                                       | Requires comment if default values are not used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Risk Assessment Contingency                                        | 2.75             | 0%                                        | User input based on Risk Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Other                                                              |                  |                                           | Requires description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                    | Complexity Input | Assigned % Total Direct Construction Cost | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preliminary and Alternative Design Evaluations                     | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Geotechnical Evaluation and Engineering                            | Moderate         | 4.0%                                      | Saturated soils with high groundwater, potential contamination due to proximity to ECY registered site and crossing railroad.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Design Engineering                                                 | Routine          | 10.0%                                     | Includes outfall replacement and potential for unknown connections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Permitting and Licences                                            | Moderate         | 1.0%                                      | Elevated due to proximity to Mill Creek with shorelines requirement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Environmental Planning and Management                              | Moderate         | 5.0%                                      | Potential contaminated soils near J Steet and 1st Street                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Cultural Resource                                                  | Moderate         | 1.0%                                      | Per DAHP WISSARD there is a high probability of encountering cultural resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Community Relations                                                | Low              | 0.2%                                      | Low impact to general community.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Real Estate Support                                                | N/A              | 0.0%                                      | The project piping is located on private property owend by Cosmo Specialty Fiber. Permanent and temporary construction easements will be needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Legal Support                                                      | N/A              | 0.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Construction Management                                            | Routine          | 8.0%                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

|            |   |             |   |   |
|------------|---|-------------|---|---|
| Likelihood | H | 3           | 4 | 5 |
|            | M | 2           | 3 | 4 |
|            | L | 1           | 2 | 3 |
|            |   | L           | M | H |
|            |   | Consequence |   |   |

|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    |            |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         | Risk Cost Impact (\$)         | Risk Schedule Cost (Months)    | Risk Probability (%) | Additional Contingency Cost (\$) | Additional Contingency Schedule Cost - Probability X Impact |     |
|------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|--------------------------------|----------------------|----------------------------------|-------------------------------------------------------------|-----|
| Category                           | Number | Risk, Threat, or Opportunity                                                                                      | Comments                                                                                                                                                                                                          | Likelihood         | Consequence        | Risk Score | Strategy                                                               | Risk Plan Proposed Mitigation                                                                                                                                                                                                                                                                                                                      |                         |                               |                                |                      |                                  |                                                             |     |
| Add lines as needed for categories |        | List potential risk from drop down menu or manual entry                                                           | Give specific comments and notes regarding the risk.                                                                                                                                                              | Use drop down menu | Use drop down menu |            | Select from menu                                                       | Add description for proposed mitigation plan                                                                                                                                                                                                                                                                                                       | Add potential risk cost | Add potential delay from risk | Add probability for occurrence | Calculated           | Calculated                       |                                                             |     |
| Project Management Risk            | 1      | Cultural resources may be encountered                                                                             | Cosmopolis is in an area listed as high probability for encountering cultural resources on DAHP WISSARD                                                                                                           | Med                | Med                | 3          | Mitigate                                                               | Obtain a cultural resource assessment near and at the outfall area during design. Consider setting new pipe alignment within the existing roadway to reduce the likelihood of encountering cultural resources during construction stage.                                                                                                           | \$                      | -                             | 0.5                            | 20%                  | \$                               | -                                                           | 0.1 |
|                                    |        | Multiple agency coordination could impact project schedule and cost                                               | Work on the outfall will require Ecology, WDFW, USACE, and potentially Tribal, coordination.                                                                                                                      | High               | Low                | 3          | Mitigate                                                               | Identify agencies involved and initiate the permitting process early in design development. Set project design schedule to accommodate coordination and permitting in advance. Additional cost for coordination was added to the indirect input values.                                                                                            |                         |                               | 8                              | 100%                 | \$                               | -                                                           | 8   |
|                                    |        | Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.) | Mill Creek is salmon bearing. Set project schedule so outfall construction occurs within the fish window. Project funding may be from grant sources with limited flexibility for design and construction changes. | Med                | Med                | 3          | Mitigate                                                               | Consider a design that keeps the existing storm line in service for as long as possible and install new storm pipe as separate dry pipe line, if feasible. This may reduce TESC costs and minimize construction constraints. Design to evaluate costs and define costs in advance to minimize risk of added costs after funding has been procured. |                         |                               |                                |                      | \$                               | -                                                           | 0   |
| Project City Team Risk             |        | Budget constraints or inflexibility                                                                               | Schedule Delay, Changed Conditions                                                                                                                                                                                | Med                | High               | 4          | Avoid                                                                  |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        | Staff Turnover                                                                                                    |                                                                                                                                                                                                                   | Med                | Low                | 2          | Accept                                                                 |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | ---        |                                                                        |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      | \$                               | -                                                           | 0   |
| Project Complexity Risk            |        | QA/QC Error or Omission                                                                                           | Potential schedule and cost impacts.                                                                                                                                                                              | Low                | Med                | 2          | Mitigate                                                               | Implement QMP with QC reviews. Build time into the schedule for reviews.                                                                                                                                                                                                                                                                           |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        | Regulatory changes, new regulations, and/or requirements                                                          | There may be storm or 404 permitting changes and new regulations implemented for work at the outfall.                                                                                                             |                    |                    | ---        | Mitigate                                                               | Initiate the permitting process early in design development.                                                                                                                                                                                                                                                                                       |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        | Permitting challenges                                                                                             | Work on the outfall will require Ecology, WDFW, USACE, and potentially Tribal, coordination.                                                                                                                      | High               | Low                | 3          | Accept                                                                 | Initiate permitting process early in the design phase to identify potential requirements.                                                                                                                                                                                                                                                          |                         |                               |                                |                      | \$                               | -                                                           | 0   |
|                                    |        | Contaminated soils and environmental considerations                                                               | County property at NW corner of J St/4th St. intersecion is a registered site with ECY.                                                                                                                           | Low                | Med                | 2          | Mitigate                                                               | Review ECY documentation on County property and recommend geotechnical testing in pipe alignment at this intersection in advance of construction. Costs were added to the geotechnical input and an allowance was added to the estimate to address potential contamination.                                                                        |                         |                               |                                |                      |                                  |                                                             |     |
| Project Risk Assessment Score      |        |                                                                                                                   |                                                                                                                                                                                                                   |                    |                    | 2.75       | When Risk Score is at or exceeds 3.0, a 5% Contingency Factor is added |                                                                                                                                                                                                                                                                                                                                                    |                         |                               |                                |                      |                                  |                                                             |     |

## Input tables

| Risk, Threats, or Opportunities                                                                                            | Likelihood | Consequence | Action   |
|----------------------------------------------------------------------------------------------------------------------------|------------|-------------|----------|
| <Type in or select from the list>                                                                                          | Low        | Low         | Accept   |
| Limited available staff and staff workload                                                                                 | Med        | Med         | Mitigate |
| Health and safety accident concerns                                                                                        | High       | High        | Transfer |
| Traffic impacts and delays                                                                                                 |            |             | Avoid    |
| Multiple agency coordination could impact project schedule and cost                                                        |            |             |          |
| Legal or regulatory special risk & challenges                                                                              |            |             |          |
| Regulatory changes, new regulations, and/or requirements                                                                   |            |             |          |
| Permitting challenges                                                                                                      |            |             |          |
| Sensitive Location (Park, near public schools, proximity to downtown or business areas, etc.)                              |            |             |          |
| Project schedule constraints or timing of project execution may impact bottom line costs (i.e. fish window, etc.)          |            |             |          |
| Objections or opposition to the project                                                                                    |            |             |          |
| Cultural resources may be encountered                                                                                      |            |             |          |
| Unknown geotechnical and subsurface conditions (e.g. groundwater)                                                          |            |             |          |
| Contaminated soils and environmental considerations                                                                        |            |             |          |
| Objectives and/or requirements are unclear                                                                                 |            |             |          |
| Additional scope changes may affect cost and schedule                                                                      |            |             |          |
| Unknown or changing site conditions                                                                                        |            |             |          |
| Unknown utilities and conflicts may affect project scope and cost                                                          |            |             |          |
| Site real estate or right-of-way procurement difficulties                                                                  |            |             |          |
| Weather conditions may negatively impact project schedule and cost                                                         |            |             |          |
| Affects customer utility services or requires service outages                                                              |            |             |          |
| Supply chain shortages and/or material cost increases                                                                      |            |             |          |
| Complex project and constructibility issues may result in major design or construction changes                             |            |             |          |
| QA/QC Error or Omission                                                                                                    |            |             |          |
| Budget constraints or inflexibility                                                                                        |            |             |          |
| Staff Turnover                                                                                                             |            |             |          |
| There is an opportunity for enhanced engineering development and value engineering alternatives to reduce estimated costs. |            |             |          |

Association for the Advancement of Cost Engineering (AACE) International

Expected Accuracy Range

| AACE<br>Estimate<br>Class | Class Number | Construction                        | AFI <sup>1</sup> | CO <sup>2</sup> | Project<br>Contingency | Low | High | Design Phase | Level of<br>Definition |             |
|---------------------------|--------------|-------------------------------------|------------------|-----------------|------------------------|-----|------|--------------|------------------------|-------------|
|                           |              | Pricing<br>Uncertainty<br>Allowance |                  |                 |                        |     |      |              |                        |             |
|                           | 5            | AACE Class 5                        | 5%               | 0%              | 10%                    | 30% | -50% | 100%         | Planning               | 0% to 2%    |
|                           | 4            | AACE Class 4                        | 3%               | 0%              | 10%                    | 25% | -30% | 50%          | Pre-design             | 1% to 30%   |
|                           | 3            | AACE Class 3                        | 2%               | 15%             | 10%                    | 15% | -20% | 30%          | 30% - 60% Design       | 30% to 60%  |
|                           | 2            | AACE Class 2                        | 1%               | 10%             | 10%                    | 10% | -20% | 20%          | 90% Design             | 60% to 95%  |
|                           | 1            | AACE Class 1                        | 0%               | 0%              | 10%                    | 5%  | -10% | 15%          | Final Design           | 95% to 100% |

1. Allowance for Indeterminates (AFI) is an estimated cost to address unknowns that cannot be accurately quantified during the design phases. Recommended values per City of Bellevue Cost Estimating Guidelines. AFI typically not added in early project stages. The stages have a contingency amount for project costs.

2. CO assigned value of 10% typical industry standard.

|            | Preliminary and | Geotechnical   |             |                | Environmental |                   |           |             |         |              |     |
|------------|-----------------|----------------|-------------|----------------|---------------|-------------------|-----------|-------------|---------|--------------|-----|
| Project    | Alternate       | Evaluation and | Design      | Permitting and | Planning and  |                   | Community | Real Estate | Legal   | Construction |     |
| Complexity | Evaluations     | Engineering    | Engineering | Licenses       | Management    | Cultural Resource | Relations | Support     | Support | Management   |     |
| N/A        |                 | 0%             | 0%          | 0%             | 0.0%          | 0%                | 0.0%      | 0.0%        | 0.0%    | 0.00%        | 0%  |
| Low        |                 | 3%             | 2%          | 6%             | 0.3%          | 3%                | 0.5%      | 0.2%        | 0.3%    | 0.05%        | 5%  |
| Routine    |                 | 4%             | 3%          | 10%            | 0.5%          | 4%                | 0.8%      | 0.4%        | 0.5%    | 0.10%        | 8%  |
| Moderate   |                 | 5%             | 4%          | 12%            | 1.0%          | 5%                | 1.0%      | 0.5%        | 0.8%    | 0.15%        | 10% |
| High       |                 | 6%             | 5%          | 15%            | 2.0%          | 6%                | 2.0%      | 1.0%        | 1.5%    | 0.20%        | 12% |

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# ABERDEEN POLICE DEPARTMENT



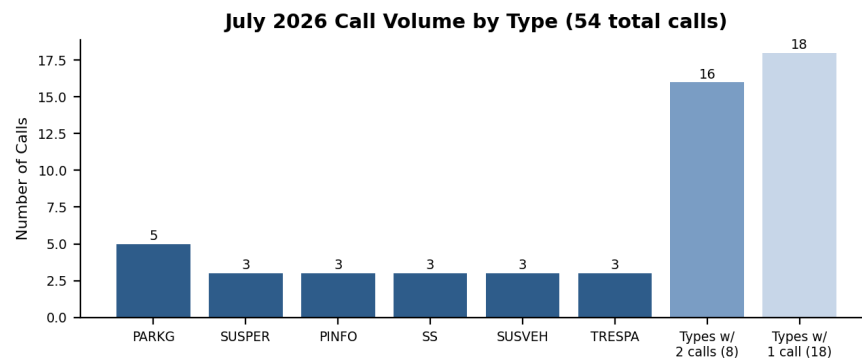
Cosmopolis City Council  
August 19, 2026

**City Council Agenda Items:** None

## **Call Stats for July of 2026:**

Excluding Fire/EMS responses, July saw 54 calls with 24 different call types. Parking (PARKG) was the most frequent category at 5 calls (9% of total volume), followed by several types tied at 3 calls each (Suspicious Person, Public Info, Suspicious Subject, Suspicious Vehicle, and Trespassing). The remaining volume was spread thinly: 8 call types occurred exactly twice, and 18 call types occurred only once. Activity peaked in the July 15–21 window with 19 calls — including a death investigation, a weapons call, and a cluster of trespassing and suspicious-vehicle reports — before tapering off in the final two weeks.

| Metric                | Value                             |
|-----------------------|-----------------------------------|
| Total Calls           | 54                                |
| Distinct Call Types   | 24                                |
| Days with Activity    | 24 of 31                          |
| Busiest Week          | Jul 15–21 (19 calls)              |
| Slowest Week          | Jul 29–31 (6 calls, partial week) |
| Most Common Call Type | PARKG – Parking (5 calls, 9%)     |



## **Speed sign data:**

| Location               | Time Period     | # CARS  | Daily AVG # | AVG SPEED | Speed Limit         |
|------------------------|-----------------|---------|-------------|-----------|---------------------|
| 1st Street @ E N/B     | 7/1/26-8/10/26  | 101,597 | 2,540       | 26.92     | 30                  |
| 1st Street @ G S/B     | 7/1/26-7/10/26* | 31,599  | 3,159       | 26.49     | 30                  |
| ALL TIME TOTAL(4/4/26) |                 | 597,585 | 2,686       | 26.73     | *Data did not store |

## **Other Items:**

1. We have hired our 37<sup>th</sup> and final budgeted Police Officer. Officer Bodenhamer started August 1<sup>st</sup>. We are still actively testing for two Police Service Officer vacancies.

2. National Night Out was Tuesday, August 4. We want to give a big thank you to both locations in Cosmopolis that we are able stop by and visit and say hello to everyone. This community is amazing because of its people.



City Council Report for  
August 18, 2026

**Calls for service:**

The Cosmopolis Fire Department had a total of 216 calls for service for 2026. Since the last report Cosmopolis Fire has had 34 calls for service. Below is a breakdown of calls per call type.

| Dates                     | AIDRSP | MEDRSP/CPR | LIFT | HAZMAT | FSTRU/FIRE/<br>FIRE ALARM | ACCUNK | TOTAL |
|---------------------------|--------|------------|------|--------|---------------------------|--------|-------|
| 07/15/2026-<br>08/15/2026 | 13     | 4          | 4    | 2      | 11                        | 0      | 34    |

**Fire 2 Academy**

2 members of Cosmopolis Fire are currently attending the Fire 2 Academy. Both members are reported to be doing well, and we are proud to have them both represent Cosmopolis Fire.

**Applications for volunteering**

We have had 2 recent inquiries with application requests for new volunteers. Applications have been sent out and follow up soon for meetings and interviews.

**Station Maintenance**

Hung Right Doors completed repairs to two bay doors. Their work is greatly appreciated, and we are so very grateful for the generosity of the DRUZIANICH CHARITABLE FAMILY FOUNDATION for their donation which helped pay for these much-needed repairs.

Respectfully,

Kasey Jo McAbee, Fire Chief