



WHATCOM COUNTY CONTRACT INFORMATION SHEET (CIS)

Whatcom Co. Contract #:

Originating Department:
Division:
Program:
Contract or Grant Administrator:
Contractor's / Agency Name:
Title of Agreement (optional):

Type of Contract:
If amendment or renewal, original contract #:
Is this is a grant agreement? If so, grantor agency contract #s: _____ ALN: _____ <i>Note: Complete ALN field if contract involves direct federal grants/cooperative agreements or pass-through federal funds.</i>
Is this contract grant-funded? _____ If yes, Whatcom County grant contract number(s): _____
If this contract the result of an RFP? _____ If yes, RFP number(s): _____
Is this contract the result of a Bid Process? _____ If yes, Bid Number(s): _____
Does this contract involve federal reimbursement? <i>(i.e. fed grant, cooperative agreement, pass-through fed funds, etc.)</i>
Procurement method:
Council review:

Fund(s):
Cost Center(s):
Object Account(s):

Original Contract Amount: \$
This Amendment Amount: \$
Total Cumulative Amount: \$

Contract term ends:

Key words/summary (optional):

Contract routing (please initial & date):

Prepared by: _____

Contractor signed: _____

Contractor review: _____

Executive review: _____

Attorney signoff: _____

Council approval, if necessary: _____

AS Finance review: _____

AB#: _____

IT review (if related): _____

Executive signed: _____

**2026 INTERLOCAL AGREEMENT BETWEEN
WHATCOM COUNTY FLOOD CONTROL ZONE DISTRICT AND
UNIVERSITY OF WASHINGTON FOR**

DELFT-FM MODEL ASSESSMENT OF MORPHODYNAMIC RIVER RESPONSE

This Interlocal AGREEMENT ("AGREEMENT") is between the University of Washington ("UW") and the Whatcom County Flood Control Zone District ("FCZD") as public agencies pursuant to the Interlocal Cooperation Act (RCW 39.34) for assessing the Nooksack River's morphodynamic response to potential channel and floodplain modifications and gain a better understanding of the sensitivity of the river's geomorphic response to discharge magnitude.

WHEREAS, Whatcom County is leading the Floodplain Integrated Planning (FLIP) Project to identify mitigation measures and update the 1999 Lower Nooksack River Comprehensive Flood Hazard Management Plan; and,

WHEREAS, ongoing sedimentation and sediment transport has been changing the dynamics of the flow split at Everson during significant flood events; and,

WHEREAS, some of the mitigation options being considered in the FLIP process are focused on trying to restore a more natural flow of sediment near Everson to reduce the variability of the flows going to the Everson-Sumas overflow corridor and downstream to Bellingham Bay; and

WHEREAS, the FCZD has retained consultants to assist in evaluating the anticipated impacts to sediment movement associated with potential mitigation options; and

WHEREAS, the state-of-the-art models used in the consulting practice are limited by their underlying assumptions and can only partially represent the natural process associated with sediment transport in gravel-bed rivers; and

WHEREAS, the UW has developed a more sophisticated morphodynamic model of the Nooksack River that can represent river processes more comprehensively but is very computation-heavy requiring use of supercomputers which limits the simulation timeframes; and

WHEREAS, the FCZD requests assistance from the UW in using their morphodynamic model of the Nooksack to support the ongoing sediment work underway in the FLIP process; and

WHEREAS, the FCZD Board of Supervisors approved Phase 1 of this work under a separate ILA in 2025 (contract number 202504024) which has since been completed and the deliverables included next steps for Phase 2 of the work; and

WHEREAS, this proposed ILA will complete Phase 2 of the work which including building confidence in the current understanding of morphodynamic adjustment in the Nooksack River near Everson and to evaluate alternatives proposed as part of the Widen the Corridor (WTC) project.; and

WHEREAS, the FCZD has the authority to utilize the services and expertise of other agencies to further efforts beneficial to the residents and citizens of Whatcom County; and,

WHEREAS, UW desires to provide such services to the FCZD.

NOW, THEREFORE, UW and the FCZD agree as follows:

- I. *Purpose:* The purpose of this AGREEMENT is to set the terms whereby the FCZD will make available funds to UW to implement a numerical model (Delft-FM) to assess the morphological response to potential changes, as described in Exhibit A attached hereto .
- II. *Administration:* No new or separate legal or administrative entity is created to administer the provisions of this AGREEMENT.
- III. *University of Washington Responsibilities:* UW hereby agrees to conduct the work described in Exhibit A attached hereto.
- IV. *FCZD Responsibilities:* The FCZD hereby agrees to reimburse UW, not to exceed the total budget amount allocated to UW as shown in Exhibit B attached hereto, for the costs of providing and performing the services stated.
- V. *Payment:* UW shall submit itemized invoices in a format approved by the FCZD in accordance with the requirements of Exhibit B. The FCZD will compensate UW for services rendered within thirty (30) days following receipt of an approved invoice, provided all other terms and conditions of the contract have been met and are certified as such by the Contract Administrator.
- VI. *Term:* This AGREEMENT shall be effective for services performed from July 1, 2026 through June 30, 2027.
- VII. *Responsible Persons:* The persons responsible for administration of this AGREEMENT shall be the Whatcom County Public Works (WCPW) Department Director and UW College of the Engineering Dean or their respective designees.
- VIII. *Treatment of Assets and Property:* No fixed assets or personal or real property will be jointly or cooperatively acquired, held, used, or disposed of pursuant to this AGREEMENT.
- IX. *Indemnification:* Each party agrees to be responsible and assume liability for its own wrongful and/or negligent acts or omissions or those of their officials, officers, agents, or employees to the fullest extent required by law, and further agree to save, indemnify, and hold the other party harmless from any such liability. It is further provided that no liability shall attach to the Parties by reason of entering into this AGREEMENT except as expressly provided herein.
- X. *Modifications:* This AGREEMENT may be changed, modified, amended or waived only by written AGREEMENT executed by the Parties hereto. Waiver or breach of any term or condition of this AGREEMENT shall not be considered a waiver of any prior or subsequent breach.
- XI. *Applicable Law:* In the performance of this AGREEMENT, it is mutually understood and agreed upon by the Parties hereto that this AGREEMENT shall be governed by the laws and regulations of the State of Washington and the federal government, both as to interpretation and performance. The venue of any action arising herefrom shall be in the Superior Court of the State of Washington in and for Whatcom County.

- XII. *Severability:* In the event any term or condition of this AGREEMENT or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other terms, conditions, or applications of this AGREEMENT that can be given effect without the invalid term, condition, or application. To this end, the terms and conditions of this AGREEMENT are declared severable.
- XIII. *Entire Agreement:* This Agreement contains all the terms and conditions agreed upon by the Parties. All items incorporated herein by reference are attached. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind any of the Parties hereto.
- XIV. *Performance:* The parties agree to satisfy all aspects of this AGREEMENT in a timely and professional manner. The UW shall notify the FCZD as soon as problems, delays, or adverse conditions become known that will materially impair its ability to meet the deliverables described in Exhibit A.
- XV. *Audit and Inspection:* The FCZD and UW shall maintain records pursuant to this AGREEMENT in accordance with generally accepted accounting principles and practices consistently applied. Records shall be subject at all reasonable times to inspection and audit and State auditor. The FCZD and UW shall preserve and make such records available to said parties until expiration of three (3) years from the date of final payment under this AGREEMENT.
- XVI. *Dispute Resolution:* The parties to this AGREEMENT shall first attempt to resolve disputes informally at the staff level. In the event that the dispute cannot be resolved at the staff level then representatives of each party with full settlement authority shall meet at a mutually agreeable time and place in Seattle, Washington within ten (10) business days of the date of the initial notice in order to exchange relevant information and perspectives, and attempt in good faith to resolve the dispute. If the dispute is not resolved by these negotiations, the matter will be submitted to a mutually agreeable and recognized nonbinding mediation service prior to initiating legal action. Any such mediation shall be conducted in Seattle, Washington and the cost of the mediation service shall be shared equally by the parties.
- XVII. *Rights and Remedies:* In no event shall a making by the FCZD of any payment to the UW constitute or be construed as a waiver by the FCZD of any breach of covenant or any default that may then exist on the part of the UW. The making of any such payment by the FCZD while any such breach or default shall exist shall in no way impair or prejudice any of the FCZD's rights, which are hereby expressly recognized, to recover payments or portions thereof, to which the UW has not entitled under this AGREEMENT, or where any payments were made by mistake, or to pursue any other remedy available to the FCZD in respect to breach or default of this AGREEMENT.

This AGREEMENT shall not relieve the FCZD or the UW of any obligation or responsibility imposed by law except that performance pursuant to this AGREEMENT may, where appropriate, be offered in satisfaction of an obligation or responsibility conveyed to the FCZD or the UW by law.

- XVIII. *Insurance Requirements: UW Self-Insurance.* UW hereby notifies the FCZD that as an agency of the State of Washington and in accordance with Washington law, UW maintains a self-insurance program pursuant to RCW §§288.20.250, 288.20.253, and 288.20.255. Upon FCZD's request, UW will provide FCZD proof of insurance or loss coverage.
- XIX. *Miscellaneous:* No obligation in this AGREEMENT shall limit the UW in fulfilling its

responsibilities otherwise defined by law. No obligation in this AGREEMENT shall limit the FCZD in fulfilling its responsibilities otherwise defined by law.

- XX. *Signatures:* The undersigned representatives accept the provisions of this AGREEMENT. This AGREEMENT shall be in effect when signed by both parties.

EXHIBIT A – SCOPE OF WORK

Objective

The objective of this project is to build confidence in the current understanding of morphodynamic adjustment in the Nooksack River near Everson and to evaluate mitigation alternatives proposed as part of the Widen the Corridor (WTC) project. The project will employ a high-resolution hydro-morphodynamic model (Delft3D-Flexible Mesh; D-FM) that has been extensively calibrated and validated during the previous phase of this project to measurements including: water surface elevation (USGS and floodplain gauges), high water marks, bedload transport and bed elevation changes.

Scope of Work

The project has three components:

1) **Model intercomparison:**

Conduct a five-year D-FM simulation that replicates the HEC-RAS baseline simulation under present day conditions. Comparison of the outputs from these two simulations will be used to build confidence in the two models and to investigate where they diverge. To do a five-year run in D-FM it will be necessary to clip low-flow periods in order to reduce the total runtime and computational load. This first component will also be used to test whether this influences model predictions.

Outputs:

- Comparison of channel change between runs with full hydrograph and clipped hydrograph
- Comparison with HECRAS channel change predictions

2) **Massey anomaly:**

The HEC-RAS model predicts that deposition upstream of Massey Rd will be amplified as a result of the WTC project, increasing water surface elevations during floods in that region. It is hypothesized that this is a model artefact that arises from the simplification of the river as a single channel in a reach that is braided in reality. The second project component will focus on testing this hypothesis by carrying out three new simulations: a) project with rectangular gravel removal; b) levee setback with no excavation; and c) plausible project graded surface with multiple channels.

Outputs:

- Prediction of channel change and flood impact change, especially near Massey Rd., with a) rectangular removal, b) levee setback and c) graded surface with multiple channels.

3) **Alternative evaluation:**

Finally, the D-FM model will be used together with the HEC-RAS model as part of an iterative process to select priority configurations for WTC. Together with the SWAG team, Northwest Hydraulics will identify approximately eight initial WTC configurations and generate graded surfaces. For each configuration, D-FM runs will be carried out in fixed bed and mobile bed mode with a series of storm hydrographs to evaluate the flood and morphodynamic responses, paying particular attention to the response near Massey Rd. Results from these first runs will be used to iterate and identify two priority configurations. For the priority configurations, five-year simulations will be run to complement HEC-RAS. In addition, 2D morphodynamic changes will be compared with physical model results to build confidence in the expected response.

Outputs:

- Prediction of channel change and flood impact change, especially near Massey Rd., with *iterative* WTC configurations.
- Prediction of channel change and flood impact change, especially near Massey Rd., with *priority* WTC configurations.

EXHIBIT B - COMPENSATION

DELFT-FM Model Assessment of Sediment Transport, Morphodynamics and flood modeling of the Nooksack River

As consideration for services provided in Exhibit A, Scope of Work, the County agrees to compensate the contractor \$209,814.

Start Date: July 1, 2026

End Date: June 30, 2027

Project duration is 1 year

Compensation was determined as follows

12 months of postdoc salary (Wuming Ni)

0.75 months of faculty salary (Alex Horner-Devine)

\$1,500 UW supercomputer resources (HYAK)

Funds will be dispersed in two increments of \$104,907 at the end of July 2026 and \$104,907 at the end of the county funded project.