

**WHATCOM COUNTY
PUBLIC WORKS DEPARTMENT**

**ELIZABETH KOSA
DIRECTOR**



River and Flood Division
322 N Commercial St.
Bellingham, WA 98225
Phone: 360-778-6230

MEMORANDUM

TO: The Honorable Members of the Whatcom County Flood Control Zone District
Board of Supervisors

THROUGH: Elizabeth Kosa, Public Works Director *EaK*

FROM: Julie Anderson, River and Flood Manager *JMA*
Gary Stoyka, Natural Resources Manager *GS*

RE: U.S. Geological Survey Joint Funding Agreement to assess alternate gaging methods

DATE: April 1, 2025

Enclosed are two (2) original copies of a contract for services between the Whatcom County Flood Control Zone District (FCZD) and the U.S. Geological Survey (USGS) for your review and signature.

Requested Action

Public Works respectfully requests that the County Council, acting as the FCZD Board of Supervisors, enter into a joint funding agreement with the USGS to develop and assess non-contact methods for measuring discharge in the Nooksack River during high-flow events.

Background and Purpose

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. Accurate high-flow discharge measurements at the Nooksack River at North Cedarville, WA gage are critical for real-time flood monitoring, flood forecasting, long-term flood hazard management, and protecting life and property. However, a combination of turbulent flows, high sediment concentrations, and large volumes of woody debris make traditional discharge measurement methods difficult, dangerous and subject to uncertainty at the high flows of interest. These challenges limit the ability to monitor and plan for flooding that would endanger life and property.

The USGS will develop and assess non-contact methods for measuring discharge in the Nooksack River to support the FLIP team, such as estimating surface velocities using handheld radar units and estimating flow depth using ground-penetrating radar or single-beam echo sounders.

Funding and Source

The proposed contract amount is \$222,698. The 2025 FCZD Budget has adequate budget authority for this work. Funding for this work is provided through an existing State Proviso to support the FLIP planning work.

Please contact Julie Anderson at extension 6258, if you have any questions or concerns regarding the terms of this Contract.