



## MEMORANDUM

**TO:** The Honorable Jack Louws, Whatcom County Executive for the Whatcom County Flood Control Zone District Board of Supervisors

**THROUGH:** Jon Hutchings, Public Works Director *JH*

**FROM:** Paula J. Harris, P.E., River and Flood Manager *AH*  
Gary Stoyka, Natural Resources Program Manager *ESW*

**RE:** BGC Engineering Inc. Contract for Services for Glacier-Gallup Creeks Alluvial Fan Restoration Feasibility and Alternatives Analysis – Amendment No. 1

**DATE:** July 22, 2019

---

Enclosed are two (2) originals of an amendment for Services between Whatcom County Flood Control Zone District (FCZD) and BGC Engineering Inc. for your review and signature.

### ▪ Background and Purpose

The Washington Department of Transportation (WSDOT) constructed an approximately 1,700 foot long levee on the west bank of Glacier Creek in the 1960s to prevent channel migration and overflows into Gallup Creek, and resulting damage to SR 542. Constriction of Glacier Creek by the SR 542 bridge and the Glacier Creek Levee has exacerbated aggradation upstream of SR 542, severely degraded fish habitat, and increased risk to USFS structures along the east bank of Glacier Creek.

WSDOT is planning to replace the two bridges with a much longer bridge spanning both creeks and the channel migration zone between them, currently proposed for construction in 2026. WSDOT requested assistance from Whatcom County Flood Control Zone District (WCFCZD) to evaluate options for removing or partially removing the left bank Glacier Creek Levee and replacing it with a setback levee(s) along the left bank of Gallup Creek to protect the community of Glacier.

BGC Engineering Inc. was retained in December 2018 to perform a risk assessment for the alluvial fan and an analysis of alternatives to mitigate the risk. Phase 1 tasks included review of background information including technical analyses by WSDOT, a site visit of both drainage basins to better define the scope of tasks needed to characterize the frequency and magnitude of debris floods, community outreach, and reporting.

Phase 2 tasks proposed for this amendment include a hydrogeomorphic hazards characterization for developing a frequency and magnitude relationship for debris floods, habitat characterization, risk assessment, conceptual alternatives development, conceptual alternatives analysis including hydraulic modeling, selection of a preferred alternative, community outreach, and reporting. Phase 2 tasks will occur through December 2020.

▪ **Funding Amount and Source**

The proposed amendment for Phase 2 of the Glacier-Gallup Creeks Alluvial Fan Restoration Feasibility and Alternatives Analysis is \$163,300 for a total contract amount of \$202,825. The 2019 FCZD budget has adequate expenditure authority for this contract amendment.

Please contact Paula Harris at extension 6285, if you have any questions or concerns regarding the terms of this agreement.

Encl.