



January 18, 2017

TO: Flood Authority Members
FROM: Scott Boettcher, Staff
SUBJECT: Contracting Basin-wide Gage Inventory

The purpose of this memo is to seek Flood Authority approval to amend WEST Consultants existing contract to conduct the "Gages Inventory" previously approved by the Flood Authority. We will discuss this at tomorrow's 1/19/2017 Flood Authority meeting. Please feel free to call or email if you have questions (i.e., 360/480-6600, scottb@sbgh-partners.com).

A. Background

1. **August 2016** – Thurston County and USGS submitted a proposal to the Flood Authority's Projects Committee to establish a common elevation (datum) for select gages on the Chehalis mainstem, as well to take over ownership and operation of two NWS (National Weather Service gages). See <https://www.ezview.wa.gov/DesktopModules/Documents2/View.aspx?tabID=28124&alias=1492&mid=68716&ItemID=4244>.
2. **October 2016** -- Upon direction of the Projects Committee, the Flood Authority's ad hoc "Gages Group" met and discussed the merits of the proposal. From that meeting it was determined a better proposal would be to:
 - a. Conduct a Basin-wide inventory on the status, ownership, utility/mission, etc. of all gages in the Basin.
 - b. Continue to move forward with resolving the ownership and maintenance issue of the NWS gages.
 - c. Develop rating curves for Centralia gage(s).
 - d. Develop an outreach plan and schedule for implementation of a common elevation (datum).
3. **October/November 2016** – At the 10/19/2016 Gages Group meeting, the group discussed and recognized the largely uncoordinated, unstructured, and unstrategic circumstance that exists for gages in the Basin. There are many interests, many owners, many gages of various ages and technical capabilities, lack of funding, and in general a lack of an overall common plan for the future of gages in the Basin. The Flood Authority approved moving forward with the larger "Gage Inventory" at their October and November meetings on the basis of this observation (and recommendation from the Projects Committee). Following links show Flood Authority's allocation to Lewis County (as fiscal agent to the Flood Authority) of \$97,810 for the inventory/assessment:
 - a. [https://www.ezview.wa.gov/Portals/_1492/images/DRAFT%20--%20Local%20Projects%20Funding%20Recommendation%20\(10-19-2016\).pdf](https://www.ezview.wa.gov/Portals/_1492/images/DRAFT%20--%20Local%20Projects%20Funding%20Recommendation%20(10-19-2016).pdf)
 - b. https://www.ezview.wa.gov/Portals/_1492/images/2015-17%20Current%20Projects%2011-16-2016.pdf

B. Gage Inventory Scope of Work

Implement a comprehensive review and plan for updating Chehalis Basin gages and sensors as follows:



1. **Gage/sensor network study:** Prioritize and conduct the following in close coordination with the Chehalis River Basin Flood Authority's ad hoc "gages group" to support a highly-functioning, strategic, and user-friendly system of gages and sensors in the Chehalis Basin:
 - a. **Network review/inventory** -- Implement a comprehensive review and inventory of the gage and sensor network in the Chehalis Basin to:
 - assess the current state of the network;
 - identify gaps in monitoring and communication; and
 - identify unmet gage needs to support accurate modeling, forecasting and the CRBFA Flood Warning System, and develop a master gage and sensor network strategic plan (for USGS, Ecology, CRBFA, NWS, local DEMs, local public works departments, etc.).
 - b. **Common gage datum** -- Inventory and develop a prioritized plan to implement a common gage datum (NAVD 88) throughout the Basin, including:
 - identifying key audiences potentially affected by the switch to a new datum, and
 - developing an outreach and education approach to ensure a smooth transition for each.
 - c. **NWS gages** -- Identify and implement steps to transition NWS gages over to the USGS gaging network and implement rating curves as necessary to improve forecasting.

C. Recommendation/Decision

Staff recommends amending WEST Consultant's existing scope of work with Lewis County to specifically conduct the Gage Inventory as described above on the basis that:

1. WEST and the Flood Authority's Flood Warning System are the predominate common denominator to the existing gages and gage owners in the Basin (e.g., Ecology, USGS, NWS, Chehalis Tribe, Aberdeen, Weyerhaeuser, etc.), and as such present a strong motivator for a more coordinated and accurate system of gages in the Basin.
2. WEST's original work done in the Basin in 2009/2010 leading up to the Flood Warning System serves as a valuable baseline from which to move forward from and TO update. See past work here -- https://www.ezview.wa.gov/Portals/_1492/images/Chehalis%20Flood%20Warning%20Conceptual%20design%20FINAL%204-2-2010.pdf.
3. WEST's positive track record with the Flood Warning System and strong relationships with gaging interests in (and outside of) the Basin is highly desired.
4. Amending WESTs contract would be more expedient and administratively efficient than issuing a new RFP and running a new procurement.