



November 18, 2020

TO: Flood Authority Members

FROM: Scott Boettcher, Staff

SUBJECT: 2021 Flood Warning System Budget and County Shares

Purpose of this memo is to discuss and allocate 2021 Flood Warning System annual operations and maintenance costs (www.chehalisriverflood.com). We will discuss at tomorrow's Flood Authority meeting. Please feel free to contact me with questions (360/480-6600; scottb@sbgh-partners.com).

We walk through the following attachments:

- Attachment A – Breakdown and Comparison of Annual O & M Costs (2014 through 2023)
- Attachment B – Staff Recommendation

Please feel free contact me with any questions (360/480-6600, scottb@sbgh-partners.com).

Attachment A
Breakdown and Comparison of Annual O & M Costs (2014 through 2023)

O&M (showing 2% annual WEST cost-increase starting 2018)											
Breakdown of Annual O & M Costs		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WEST Consultants	<i>Gage maintenance</i> -- 12 gages (including 4 stream gages) located across basin.	\$ 38,438	\$ 38,438	\$ 38,438	\$ 38,438	\$ 39,207	\$ 39,991	\$ 46,391	\$ 53,031	\$ 54,091	\$ 55,173
WEST Consultants	<i>Operational support</i> -- On-going support for website monitoring and updates for both routine operations and during potential flood events.	\$ 11,336	\$ 11,336	\$ 11,336	\$ 11,336	\$ 11,563	\$ 11,794	\$ 12,030	\$ 12,270	\$ 12,516	\$ 12,766
WEST Consultants	<i>Spare parts inventory</i> -- Extra parts in event of broken or malfunctioning gages.	\$ -	\$ 6,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 3,000	\$ 3,000	\$ 3,000
Blu Telecomm	<i>Webcam cell fees</i> -- 3 cell data plans (\$125/month).							\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500
OneRain	<i>Webcam subscription fees</i> -- 3 subscriptions (\$105/month).							\$ 1,260	\$ 1,260	\$ 1,260	\$ 1,260
OneRain	<i>Website</i> -- One-rain annual subscription (285 sensors in and near Chehalis Basin).	\$ 3,811	\$ 3,811	\$ 5,261	\$ 5,261	\$ 5,500	\$ 5,877	\$ 6,000	\$ 6,500	\$ 6,500	\$ 6,500
WEST Consultants	<i>Removal</i> -- Removal of gage, webcam infrastructure TBD at time of request.							\$ -	\$ -	\$ -	\$ -
Lewis County	<i>Billing and processing.</i>	\$ -	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900
Total -->		\$ 53,585	\$ 60,485	\$ 57,935	\$ 57,935	\$ 59,169	\$ 60,562	\$ 70,081	\$ 78,461	\$ 79,767	\$ 81,099
Note1 -- State Capitol Budget is eligible to pay for installation and calibration. Local resources are needed to pay for annual O&M (operations and maintenance).											
Note2 -- " <i>Website</i> " cost item for 2021 increased from \$6,000 to \$6,500 in order to: (1) renew domain name and website subscriptions for "www.chehalisriverflood.com"; and (2) add 25 additional sensors as current 260 sensor limit has been met (Thurston County for example added 11 new or upgraded weather stations and stream stations to the system in 2020).											

Attachment B Staff Recommendation

I. Recap of 2014-2019 Allocation Approach

Annual cost for 2014, 2015, 2016, 2017, 2018, 2019, and 2020 were allocated among Flood Authority counties as follows:

- Grays Harbor County -- 22%.
- Lewis County -- 64%.
- Thurston County -- 14%.

The method behind this allocation was as follows:

- 50% of the allocation was based on populations of communities prone to flooding.
- 50% was based on historic FEMA flood insurance payments.

This allocation approach was unanimously supported by Flood Authority beginning in 2014 (see [here](#)).

II. Staff Recommendation

Flood Authority agrees to use the same allocation approach as last year (see [here](#)) on the basis that relatively little has changed in the Basin in terms of population shifts and/or exposure to flood risk, i.e., Lewis County still has largest population and risk exposure in the Basin.

2021 annual costs are proposed in the same manner as 2020 with Grays Harbor County paying 22% of costs, Lewis County paying 64% of costs, and Thurston County paying 14% of costs. 2021 costs are:

	2020	2021	Difference (increase)
Grays Harbor County (22%)	\$15,417.72	\$17,261.42	\$1,843.69
Lewis County (64%)	\$44,851.56	\$50,215.03	\$5,363.46
Thurston County (14%)	\$9,811.28	\$10,984.54	\$1,173.26

Increased costs for 2021 are due to:

1. Operations and maintenance costs for Flood Authority gages (12) and webcams (3) are now the responsibility of local resources (i.e., State Capital Budget is not eligible for on-going O&M).
2. Need to renew domain name and website subscriptions for www.chehalisriverflood.com.
3. Need to add 25 additional sensors as current 260 sensor limit has been met (e.g., Thurston County added 11 new or upgraded weather stations and stream stations to system in 2020).

Staff and Lewis County (as fiscal agent) are directed to implement and prepare payment schedules (1st half due 3/31/2020; 2nd half due 7/31/2020).

Note: Lewis County, acting as Flood Authority's fiscal agent, has historically handled billing and processing for costs with Flood Warning System. It is assumed this practice will continue for 2021.