



November 14, 2022

TO: Flood Authority Members

FROM: Scott Boettcher, Staff

SUBJECT: 2023 Flood Warning System Budget and County Shares

Purpose of this memo is to discuss and allocate 2023 Flood Warning System annual operations and maintenance costs (www.chehalisriverflood.com). We will discuss at Thursday's Flood Authority meeting.

We walk through the following attachments:

- Attachment A – Breakdown and Comparison of Annual O & M Costs (2014 through 2024)
- 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 2024)

Operations & Maintenance (O & M)												
Breakdown of Annual O & M Costs		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WEST Consultants	<i>Gage maintenance</i> ** -- 13 gages (including 4 stream gages) located across basin.	\$ 38,438	\$ 38,438	\$ 38,438	\$ 38,438	\$ 39,207	\$ 39,991	\$ 46,391	\$ 53,031	\$ 56,212	\$ 64,585	\$ 68,460
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	\$ 13,007	\$ 13,787	\$ 14,614
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	\$ 3,000
MobilityHelpDesk	<i>Webcam cell fees</i> -- 3 cell data plans (~\$125/month).							\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500
OneRain	<i>Webcam subscription fees</i> -- 4 subscriptions (~\$140/month).							\$ 1,260	\$ 1,260	\$ 1,260	\$ 1,680	\$ 1,680
OneRain	<i>Website</i> -- One-rain annual subscription (291 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	\$ 6,500
WEST Consultants	<i>Removal/Relocation of Gages</i> -- None at present. Chehalis River below Thrash Creek near Pe Ell likely will need to be relocated in next 5-10 years due to increasing tree shading of solar panels.											
Lewis County	<i>Billing and processing.</i>		\$ 900	\$ 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	\$ 82,379	\$ 91,952	\$ 96,655
Note 1 -- Cost for gage maintenance (**) and operational support (**) increased 2% 2018-21, 6% 2022-23, and is projected to increase another 6% 2023-24.												
Note 2 -- Cost for operational support (**) additionally increased by \$5,000 due to adding a 13th additional gage (Willapa Hills weather station).												
Note 3 -- Contrail webcam subscription fee increased for 2023 because of additional webcam zoom-in on Heron Street bridge (Aberdeen).												
Note 4 -- New China Creek gage is installed and separately covered in its calibration costs through calendar year 2024.												

Attachment B Staff Recommendation

I. Recap of 2014-2022 Allocation Approach

Annual costs for 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, and 2022 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.
- 2023 annual costs are proposed in the same manner as 2022 with Grays Harbor County paying 22% of costs, Lewis County paying 64% of costs, and Thurston County paying 14% of costs, and still employing an inflation factor of 6% as described.

	2022	2023	Difference
Grays Harbor County (22%)	\$18,123	\$20,229	\$2,106
Lewis County (64%)	\$52,723	\$58,849	\$6,127
Thurston County (14%)	\$11,533	\$12,873	\$1,340
Total →	\$82,379	\$91,952	\$9,573

- Staff and Lewis County (as fiscal agent) are directed to implement and prepare payment schedules (1st half due 3/31/2023; 2nd half due 7/31/2023).

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 2023.