



September 14, 2015

TO: Flood Authority Members
FROM: Scott Boettcher, Staff
SUBJECT: 2016 Flood Warning System Costs

The purpose of this memo is to discuss and set allocation of 2016 annual maintenance costs for the Flood Warning System (www.chehalisriverflood.com). Below please find (1) breakdown of 2016 costs, (2) recap of 2015 allocation approach, and (3) staff recommendation. Please feel free to call or email if you have any questions (i.e., 360/480-6600, scottb@sbgh-partners.com).

I. Breakdown of 2016 Costs

Breakdown of 2016 Annual O & M Costs		2014	2015	2016	Difference 2015-2016
WEST Consultants	Gage maintenance -- 10 gages (including 1 stream gage) located in Chehalis Basin.	\$38,438.00	\$ 38,438.00	\$38,438.00	\$ -
WEST Consultants	Operational support -- On-going support for website monitoring and updates for both routine operations and during potential flood events.	\$ 11,336.00	\$ 11,336.00	\$ 11,336.00	\$ -
WEST Consultants	Spare parts inventory -- Extra parts in event of broken, malfunctioning gages.	\$ -	\$ 6,000.00	\$ 2,000.00	\$(4,000.00)
OneRain	Website -- One-rain annual subscription (~120 sensors in and near Chehalis Basin).	\$ 3,811.00	\$ 3,811.00	\$ 5,261.00	\$ 1,450.00
Lewis County	Billing and processing.	\$ -	\$ 900.00	\$ 900.00	\$ -
Total -->		\$53,585.00	\$60,485.00	\$ 57,935.00	\$(2,550.00)

II. Recap of 2015 Allocation Approach

Annual maintenance costs for 2014 were allocated among the three Flood Authority counties as follows:

- Grays Harbor -- \$11,788.70 (22%).
- Lewis -- \$34,294.40 (64%).
- Thurston -- \$7,501.90 (14%).

Annual maintenance costs for 2015 were similarly allocated:

- Grays Harbor -- \$13,306.70 (22%).



- Lewis -- \$38,710.40 (64%).
- Thurston -- \$8,467.90 (14%).

The method behind the allocation was as follows:

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

This allocation approach was unanimously supported by Flood Authority for 2014 and 2015 (see [here](#)).

III. Staff Recommendation

Flood Authority members agree to use same allocation approach as last year on the basis that relatively speaking not a lot has changed in the Basin in terms of population shifts and exposure to flood risk, i.e., Lewis County still has largest population and risk exposure in the Basin.

Staff computes costs for 2016 as follows:

- Grays Harbor -- \$12,745.70.70 (22%).
- Lewis -- \$37,078.40 (64%).
- Thurston -- \$8,110.90 (14%).

Staff work with Lewis County to prepare payment schedule (1st half due 3/31/2016; 2nd half due 7/31/2016).

IV. Other News

- Here is 2015 Activity Update from Dave Curtis (WEST Consultants) -- https://www.ezview.wa.gov/Portals/_1492/images/WEST2015UpdateMemo.pdf.
- Here is Updated Flood Warning System Brief Sheet (9/2015) -- https://www.ezview.wa.gov/Portals/_1492/images/Updated%20Flood%20Warning%20System%20Brief%20Sheet%2009142015.pdf.
- Here is link to Updated Flood Warning System Website (9/2015) -- www.chehalisriverflood.com.
- Here DRAFT Email to Sign-Up for Email Gage Alerts (2015/16) -- https://www.ezview.wa.gov/Portals/_1492/images/DRAFT%20Gages%20Email.pdf.
- Here is a website Logo for Flood Warning System:
 - Option A -- https://www.ezview.wa.gov/Portals/_1492/images/default/Chehalis%20River%20Basin%20alt%201.png.
 - Option B -- http://ci.chehalis.wa.us/sites/default/files/imagecache/fullnode/imageattachments/chehalis_river_basin_3.png.
- 2015/16 Forecast from Dave Curtis (WEST Consultants) -- <https://www.ezview.wa.gov/DesktopModules/Articles2/ArticlesView2.aspx?tabID=0&alias=1492&ItemID=683&mid=67920&wversion=Staging>.