



April 30, 2012

Robert Johnson
 Lewis County, WA
 Director of Community Development
 2025 NE Kresky Avenue
 Chehalis, WA 98532

California
 11440 W. Bernardo Ct.
 Suite 360
 San Diego, CA 92127-1644

858-487-9378
 858-487-9448 FAX

101 Parkshore Dr.
 Folsom, CA 95630-4726

916-932-7402
 916-932-7408 FAX

Oregon
 2601 25th Street SE
 Suite 450
 Salem, OR 97302-1286

503-485-5490
 503-485-5491 FAX

10300 SW Greenburg Road
 Suite 470
 Portland, OR 97223

503-946-8536
 503-946-8537FAX

Washington
 12509 Bel-Red Road
 Suite 100
 Bellevue, WA 98005-2525

425-646-8806
 425-646-0570 FAX

Arizona
 8950 S 52nd St.
 Suite 210
 Tempe, AZ 85284-1137

480-345-2155
 480-345-2156 FAX

River Measurement
A Division of WEST Consultants
 811 NE 154th Street
 Vancouver, WA 98685

360.571.2290
 360.571.2291 Fax

www.westconsultants.com

Subject: Chehalis Flood Warning System Budget Items

Dear Bob:

Here's our budget estimate for the Chehalis Flood Warning System for July 1, 2012 to June 30, 2013. It assumes that we will not conclude installation of the remaining rain and stream gages due to continuing negotiations for site access. If we are able to finish any of the remaining installations, the 2012-13 budget can be adjusted accordingly. Estimates for installation and field calibration/testing are essentially the same as last year. The annual Conrail subscription increased slightly due to the higher number of data sensors managed on the Chehalis website now.

I added an item for OneRain to install the new flood inundation maps derived from the expanded Chehalis River hydraulic models. The new models doubled the number of river miles mapped. Approximately 2,000 individual neighborhood flood inundation maps are being created by WEST as part of the USACE and Flood Authority modeling projects and will be available to install on the website. By leveraging the modeling projects, the effective cost of these maps is significantly lower than the original maps.

TASK	DESCRIPTION	COST
1	Install remaining rain and stream gages. (Pending resolution of Installation Permits with Washington Dept of Natural Resources and Weyerhaeuser.)	\$ 9,331
	Subtotal Task 1	\$ 9,331
2	Field calibration & testing of rain and stream Gages: July 1, 2012-June 30, 2013	\$ 38,438
	Subtotal Task 2	\$ 38,438
3	Website & System Support	
	Installation of flood inundation maps derived from the new/expanded Chehalis River Model.	\$ 9,999
	Contail annual subscription (120 total sensors in and near the Chehalis River Basin)	\$ 3,811
	Agency coordination	\$ 3,104
	Operational Support	\$ 11,336
	Other Direct Costs	\$ 1,250
	Subtotal Task 3	\$ 29,500
	Total	\$ 77,269

Based on our experience over the past year providing website support during flooding and potential flooding events, posting news items regarding website status, website performance monitoring, and providing support when the Conrail website is upgraded. I added some time for operational support from WEST. Long term, these are tasks that could be handled locally by someone within the Flood Authority. In the interim, WEST can provide these support and coordination services.

If you have any questions, don't hesitate to contact me directly.

Sincerely,

David C. Curtis, Ph.D.
 Vice President