

Table 1 -- Trial ROI Analysis

Sponsor	Project	State Capital Budget	Direct Value Protected	ROI	Future Damage Costs Avoided (Per Event)	ROI	Construction	Planning, Design, Permitting
Bucoda	Foundation Flood Openings Pilot Project	\$ 96,812	\$ 1,237,100	13 to 1	\$ 275,000	3 to 1		
Centralia	(Phase I & II) China Creek Floodwater Storage & Habitat	\$ 4,610,000	\$ 80,858,100	18 to 1	\$ 7,060,000	1.6 to 1		
Chehalis	Chehalis-Centralia Airport Pump Project	\$ 1,146,000	\$ 40,572,000	35 to 1	\$ 1,000,000	1 to 1		
Hoquiam	Ramer Street Pump Station Project	\$ 1,300,000	\$ 14,119,806	11 to 1	\$ 2,642,691	2 to 1	100% State Capital Budget \$\$\$	100% Local \$\$\$
Thurston County	Home Elevations Pilot Project	\$ 293,057	\$ 682,200	2 to 1	\$ 75,000	.25 to 1		
		<b>\$ 7,445,869</b>	<b>\$ 137,469,206</b>	<b>18 to 1</b>	<b>\$ 11,052,691</b>	<b>1.5 to 1</b>		

## NOTE:

1. This initial conceptual analysis looks at assessed values as well project sponsors' estimates of likely future damage costs.
2. Intent is a trial analysis for further discussion.
3. This document should be considered as such -- a trial conceptual analysis intended only for discussion purposes.

Questions, comments, etc:

Scott Boettcher, Staff

Chehalis River basin Flood Authority

360/480-6600

scottb#sbgh-partners.com

Table 2 -- Further Potential ROI Analysis

Sponsor	Project	State Capital Budget
Aberdeen	Southside Dike/Levee Certification Project	\$ 45,098
Bucoda	Wellhead Protection Levee Project	\$ 309,399
Chehalis Tribe	Flood Gage Station (USGS 12028060 Chehalis River Near Rochester, WA)	\$ 50,000
Chehalis Tribe	Sickman-Ford Overflow Bridge and Harris Creek Culvert Replacement Project	\$ 2,075,000
Cosmopolis	Mill Creek Dam Design and Construction Project	\$ 4,386,670
Elma	WWTP Outfall Stabilization Project	\$ 315,816
Grays Harbor County	Wishkah RoadWishkah Road Flood Levee Project	\$ 4,980,965
Lewis County	Adna Levee	\$ 244,145
Lewis County	Airport Road Structure Demolition Project	\$ 128,669
Lewis County	Airport Levee Phase I	\$ 1,349,021
Lewis County	Flood Warning SystemDatum Survey/Set for Flood Authority Gages	\$ 8,560
Lewis County	Flood Warning SystemReplace Two NWS Gages (Centralia Area)	\$ 61,595
Lewis County	Flood Warning SystemReplace WF Satsop River Gage Due to Flood Damage	\$ 10,050
Lewis County	Flood Warning SystemUpgrade GOES Radio Transmitters	\$ 22,245
Lewis County CC	Boistfort Valley Water Pre-Sedimentation Pond Project	\$ 309,143
Montesano	Revetment to Protect Montesano Rd., WWTP and Mary's River Lumber Project	\$ 5,993,234
Montesano	West McBryde Culvert Replacement Project	\$ 107,045
Montesano	WWTP Protection Project	\$ 4,942,769
Pe Ell	Wastewater Treat. Plant Flood Prevention Dike Project	\$ 416,000
Port of Chehalis	Berwick Creek Restoration Project	\$ 416,502
Thurston County	Weather and Stream Monitoring Telemetry Project	\$ 49,835
WSCC	Chehalis Basin Farm Pads & Evacuation Routes Project	\$ 809,418
		<b>\$ 27,031,178</b>

# Bucoda

## Foundation Flood Openings Pilot

Owner	Contractor (CleanSpace NW) Paid by RCO (includes tax)	Assessed Value Protected	Future Damage Costs Avoided
Coffman	\$ 10,399	\$ 108,100	\$ 25,000
Deatrich	\$ 8,861	\$ 103,500	\$ 25,000
Fagenstrom	\$ 21,324	\$ 287,300	\$ 25,000
Green (Stiltner)	\$ 8,025	\$ 118,300	\$ 25,000
Hardy	\$ 7,823	\$ 113,700	\$ 25,000
Leigh (Tee)	\$ 4,721	\$ 60,200	\$ 25,000
Mitchell	\$ 7,135	\$ 48,300	\$ 25,000
Myers	\$ 8,861	\$ 93,800	\$ 25,000
Richter	\$ 8,875	\$ 108,800	\$ 25,000
Roy (Andringa)	\$ 8,699	\$ 65,900	\$ 25,000
Starkey	\$ 1,834	\$ 129,200	\$ 25,000
	\$ 96,557	\$ -	\$ -
	\$ 255	\$ -	\$ -
See Interactive Map: <a href="#">here</a>	\$ 96,812	\$ 1,237,100	\$ 275,000
	ROI -->	12.77837194	2.840556369
	ROI -->	13 to 1	3 to 1

Owner	Cost	Assessed Value Protected	Future Damage Costs Avoided
Centralia China Creek (I&II)	\$ 4,610,000		
	3 apartment complexes	\$ 80,858,100	\$ 7,060,000
	12 residential properties		
	26 commercial/businesses		
	Centralia College		
		\$ 80,858,100	\$ 7,060,000
	ROI -->	17.539718	1.531453362
	ROI -->	18 to 1	1.6 to 1

Owner	Cost	Assessed Value Protected	Future Damage Costs Avoided
Chehalis-Centralia Airport Pump Project	\$ 1,146,000		
5605080001	Airport	\$ 2,620,900	\$ 1,000,000
5665110003	U-Haul (formerly Kmart)	\$ 2,704,900	
5605082119	Group of Stores-incl Wendy's	\$ 9,700,000	
5605080001	WalMart bldg	\$ 2,620,900	
5605082017	Home Depot bldg	\$ 12,131,300	
21612011001	I-5 Toyota	\$ 3,150,000	
5605826003	Dutch Bros Coffee	\$ 144,000	
5605826001	Burger King Restaurant	\$ 660,000	
5605016001	Taco Bell Restaurant	\$ 515,000	
5605824001	Sonic Restaurant	\$ 535,700	
5605082003	Group of stores - incl Applebees	\$ 920,000	
5605082002	Group of stores -incl Verizon	\$ 2,373,000	
5605082001	Group of stores - incl Wallgreens	\$ 1,768,000	
5605080001	Corner stores - incl McDonalds	\$ 50,000	
5665110004	Car Dealership	\$ 388,300	
5665111000	State Patrol office	\$ 290,000	
		\$ 40,572,000	\$ 1,000,000
	ROI -->	35.40314136	0.872600349
	ROI -->	35 to 1	1 to 1

Owner	Cost	Assessed Value Protected	Future Damage Costs Avoided
Hoquiam Raymer Street Pump	\$ 1,300,000		
LANDUSE	LANDVALUE	BLDGVALUE	
11 - Residential - Single Family	\$ 2,432,116	\$ 9,267,373	
12 - Residential - 2-4 Units	\$ 106,690	\$ 644,540	
18 - Residential - All other	\$ 3,990	\$ -	
49 - Transportation - Other	\$ 11,063	\$ 831,830	
54 - Trade - Food	\$ 15,960	\$ 191,829	
91 - Undeveloped - Land	\$ 612,460	\$ 1,955	
Sub --Totals	\$ 3,182,279	\$ 10,937,527	
Total -->	\$ 3,182,279	\$ 10,937,527	
		\$ 14,119,806	\$ 2,642,691
	ROI -->	10.86138923	2.032839231
	ROI -->	11 to 1	2 to 1

#### Thurston County Home Elevations Pilot:

[here](#)

Owner	Cost	Assessed Value Protected	Future Damage Costs Avoided
Don Tapio		\$ 146,200	\$ 25,000
Robert Young		\$ 286,100	\$ 25,000
Gerda Reising		\$ 249,900	\$ 25,000
	\$ 293,057	\$ 682,200	\$ 75,000
	ROI -->	2.327874782	0.255922909
	ROI -->	2 to 1	.25 to 1

Owner	Cost	Assessed Value Protected	Future Damage Costs Avoided
TOTALS	\$ 7,445,869	\$ 137,469,206	\$ 11,052,691
	ROI -->	18.46247975	1.484405779
	ROI -->	18 to 1	1.5 to 1