



What Are Local Projects?

10/17/2019

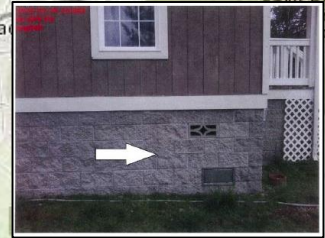
General Description

In general, local projects reduce flood damage caused by floods of the Chehalis River and its major tributaries. The damage could be to public or private improvements. If a local project is proposed to reduce flood damage to private property, there must be a public benefit. Local projects are projects that provide localized, quantifiable benefit, are capable of being completed typically within one or two funding phases, are supported by the jurisdiction within which the project is proposed, and are vetted and sponsored through a public entity like a City, County, Conservation District, Port, Tribe, etc. Local projects will not have adverse impacts to fish, wildlife, or habitat, and where possible provide multiple, quantifiable benefits. Local projects are not maintenance projects.

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Another Chehalis Basin Flood Protection Project
 Wastewater Treatment Plant Flood Prevention Dike
 Schedule → February 2014 to April 2014
 Budget → \$511,153
 Benefit → Protecting essential public infrastructure for all Basin residents
www.ezview.wa.gov
 STELLAR
 Parametric



Another Chehalis Basin Flood Protection Project
 Drinking Water Protection Levee
 Schedule → March 2014 to July 2014
 Budget → \$305,000
 Benefit → Protecting essential drinking water supply for all Basin residents
www.ezview.wa.gov/chehalisbasinlocalfloodreliefprojects
 STELLAR
 Parametric

1. ~2-4 years to design, permit, construct.
2. Protect people, property, infrastructure.
3. Improve readiness, response, resiliency.
4. Completed examples:
 - Drinking Water (Boistfort, Bucoda).
 - Wastewater (Montesano, Pe Ell).
 - Emergency Response (Grays Harbor County, Chehalis-Centralia Airport).
 - Regional Economic Infrastructure (Montesano).
 - Community Protection (Adna, Bucoda, Centralia, Chehalis, Chehalis Tribe, Oakville).
 - Flood Warning Infrastructure (Basin-wide).
5. Typical funding phase = \$250K to \$2M.



- Construction, Complete
- Construction, Incomplete
- Plan/Study/Tool, Complete
- Plan/Study/Tool, Incomplete

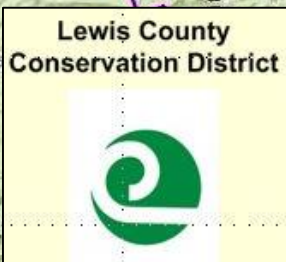
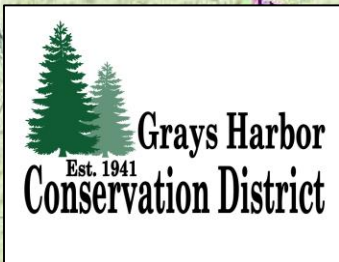
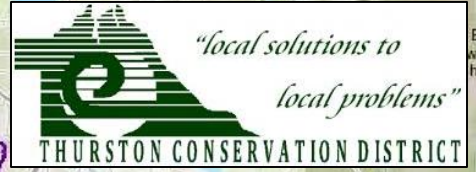
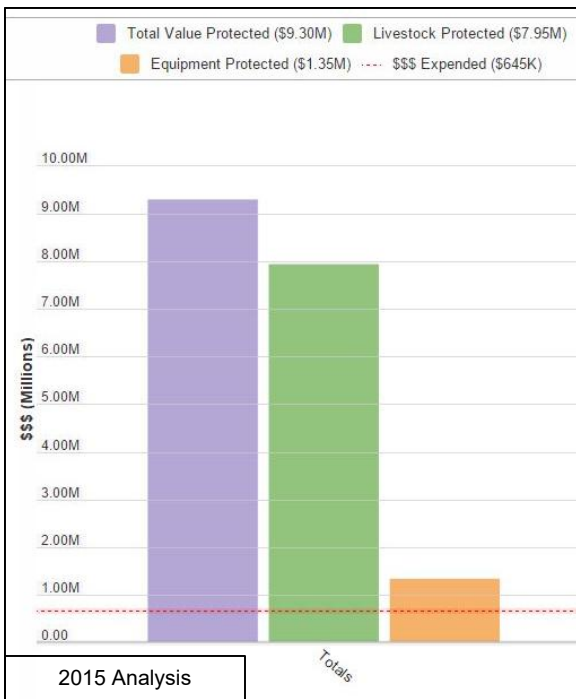
www.ezview.wa.gov/chehalisbasinlocalfloodreliefprojects

Local Projects (2012-21)

www.ezview.wa.gov/chehalisfloodauthority

Contact: Scott Boettcher; Staff, Chehalis River Basin Flood Authority; 360/480-6600; scottb@sbgh-partners.com





1. Save lives, livelihoods.
2. Protects people, animals, equipment.
3. 26 locations throughout Basin.
4. <2 years to design, permit, construct.
5. 14:1 return-on-investment.
6. Benefit whole basin.
7. Reusable.
8. Testimonials → <http://arcg.is/2b632Ai>.

Animal/Equipment Now Protected:

• Beef	4
• Bulls	3
• Calves	210
• Cows	2,480
• Goats	118
• Heifers	645
• Horses	77
• Sheep	165
• Yearlings	9
• -----	-----
• Tractors	36
• Pieces	42

★ → Complete
 ★ → Underway

Farm Pads, Evacuation Routes (2012-19)



www.ezview.wa.gov/chehalisfloodauthority



1. Foundation vents (right) will not protect against floods; foundation flood openings (below) will.

2. Bucoda pilot installed proper foundation flood openings in 11 homes, and provided new Elevation Certificates to homeowners to lower flood insurance payments.



ELEVATION CERTIFICATE

SECTION 1 - PROPERTY IDENTIFICATION

SECTION 2 - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

SECTION 3 - BUILDING ELEVATION INFORMATION (SUBJECT REQUIRED)

SECTION 4 - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

03-03-164



2015-16 Local Floodproofing Pilot "Bucoda Foundation Flood Opening Retrofits"

www.ezview.wa.gov/bucodafloodrelief

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Chehalis River Basin Flood Warning System

Access real time Rainfall, River Levels, and other Flood related information below.

Rainfall Summary
River Summary
Additional Resources

Weather Forecast

Rainfall Forecast

River Forecast

Flood Maps

Plot Gage Data

Gage Data Maps

Landslide

Radar Rainfall

Road Conditions

USGS Gages

Atmospheric Rivers

Chehalis Basin Gage Height Conversion Project

Flood Inundation Maps

Chehalis River Flood Base Map

Chehalis River at Centralia, WA

Current NWS Forecast: 53.27 ft

3/6/2014 11:30 AMZ (observed value)

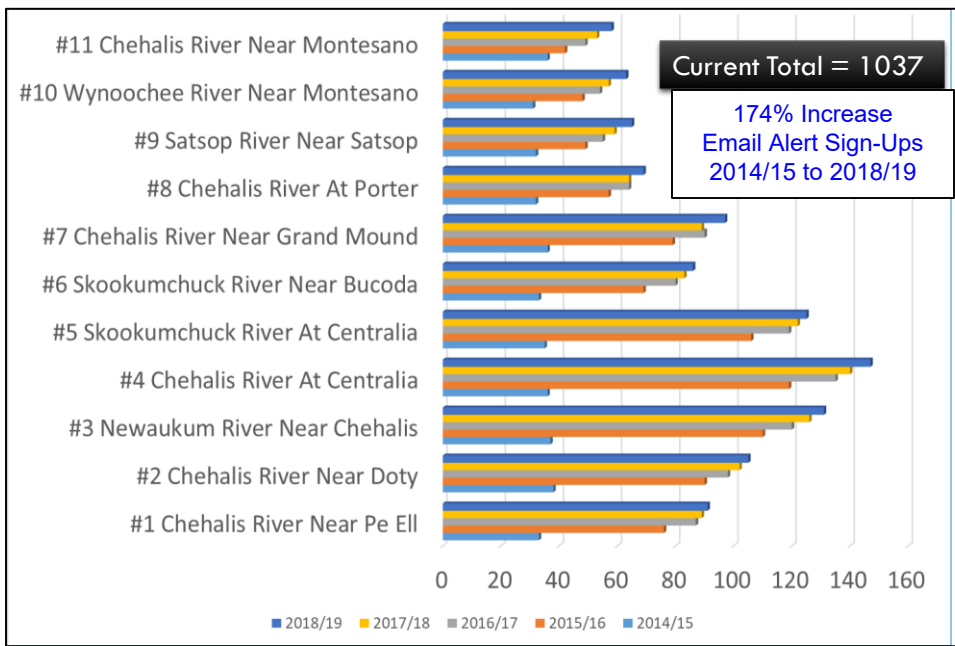
River Stage (ft)

61.0
61.6
62.6
63.6
64.6
65.6
66.6
67.6
68.6
69.6
70.6
71.6
72.6
73.6
74.6
76.1

Minor Flood Stage: 65.6 - 67.6

Moderate Flood Stage: 68.6 - 70.6

Major Flood Stage: 71.6 - 76.1

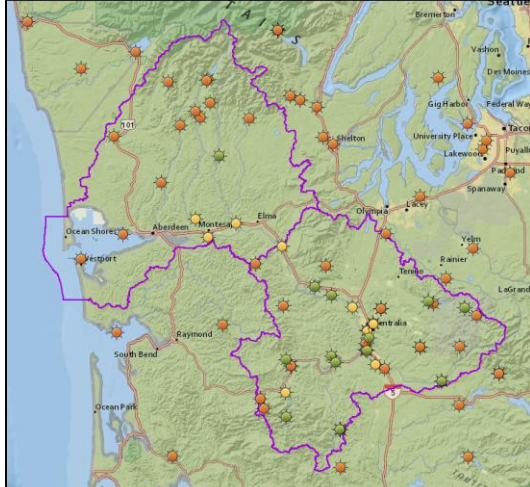


National Weather Service Advanced Hydrologic Prediction Service

Over 300 real-time observations used to support river forecasts are at risk across the country. Refer to the USGS's National List of Threatened Drainages for additional information.

Weather Forecast Office Seattle, WA

CHEHALIS RIVER AT PORTER



Real-Time
Rain/Temperature
Station

Chehalis Basin Flood Warning & Alert System

www.chehalisriverflood.com

NOTE: "Complete" means provides functional flood hazard reduction benefit, yet may not be administratively complete.

ID	Project	2013		2014		2015		2016		2017		2018		2019		2020		2021		
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	Aberdeen -- Southside Dike/Levee Certification	\$45,098																		
2	Bucoda -- Foundation Flood Openings Pilot	\$96,812																		
3	Bucoda -- Wellhead Protection Levee	\$309,399																		
4	Centralia -- (Phase I) China Creek Floodwater Storage & Habitat	\$2,200,000																		
5	Chehalis -- Chehalis-Centralia Airport Pump	\$1,146,000																		
6	Chehalis Tribe -- New Gage (USGS 12028060, Rochester)	\$50,000																		
7	Chehalis Tribe -- Sickman-Ford Overflow Bridge	\$2,075,000																		
8	Cosmopolis -- Mill Creek Dam	\$4,386,670																		
9	Elma -- WWTP Outfall Stabilization	\$315,816																		
10	Grays Harbor County -- Wishkah Road Flood Levee	\$4,980,965																		
11	Hoquiam -- Raymer Street Pump Station	\$1,300,000																		
12	Lewis County -- Adna Levee	\$244,145																		
13	Lewis County -- (Phase I) Airport Levee	\$1,349,021																		
14	Lewis County -- Airport Road Structure Demolition	\$128,669																		
15	Lewis County -- (Flood Warning System) Reset Flood Authority Gage Datums	\$8,560																		
16	Lewis County -- (Flood Warning System) Replace NWS Gages	\$61,595																		
17	Lewis County -- (Flood Warning System) Replace WF Satsop River Gage	\$10,050																		
18	Lewis County -- (Flood Warning System) Upgrade GOES Radio Transmitters	\$22,245																		
19	Lewis County CD -- Boistfort Valley Water	\$309,143																		
20	Montesano -- Protect Montesano Rd., WWTP, Mary's River Lumber	\$5,993,234																		
21	Montesano -- West McBryde Culvert Replacement	\$107,045																		
22	Montesano -- WWTP Protection	\$4,942,769																		
23	Pe Ell -- WWTP Flood Prevention Dike	\$416,000																		
24	Thurston County -- Home Elevations Pilot	\$293,057																		
25	Thurston County -- Weather and Stream Monitoring Telemetry	\$49,835																		
26	WCC -- Farm Pads & Evacuation Routes	\$809,418																		
27	Centralia -- (Phase II) China Creek Floodwater Storage & Habitat	\$2,410,000																		
28	Port of Chehalis -- Berwick Creek Restoration	\$416,502																		
29	Aberdeen -- North Shore Levee (Burger King Trail/Dike)	\$164,600																		
30	Aberdeen -- North Shore Levee (Dike Bank of Wishkah North of Highway)	\$317,000																		
31	Aberdeen -- North Shore Levee (Market Street Dike)	\$670,000																		
32	Bucoda -- Main Street Regrade (BNSF ROW Evacuation Route)	\$118,117																		
33	Chehalis -- Dillenbaugh Creek Culvert Assessment	\$109,000																		
34	Grays Harbor County -- Elma-Porter Flood Mitigation	\$104,000																		
35	Grays Harbor County -- Lower Satsop Priority Planning, Visioning	\$40,000																		
36	Grays Harbor County -- Lower Satsop River Floodplain Restoration	\$50,000																		
37	Grays Harbor County -- Wishkah Road Comprehensive Flood Study	\$353,377																		
38	Lewis County (Flood Warning System) -- Gages Inventory	\$97,810																		
39	Lewis County -- Public Information Program (CRS 330, 370)	\$31,000																		
40	Napavine -- Kirkland Road Study	\$37,684																		
41	Oakville -- Flood Relief Study	\$50,150																		
42	Thurston CD -- Innovative Farm Pads	\$3,143																		
43	Thurston County -- Independence Road Flood Study	\$100,000																		
44	WCSSF -- Habitat Work Schedule Pilot	\$85,000																		
45	Aberdeen -- Fry Creek Restoration and Flood Reduction Design	\$500,000																		
46	Aberdeen -- North Shore Levee	\$2,775,721																		
47	Chehalis -- Flood Storage and Habitat Enhancement Master Plan	\$443,977																		
48	CRBFCZD -- Comprehensive Flood Hazard Management Plan	\$239,075																		
49	Grays Harbor CD -- Lower Satsop Flood Hazard Reduction Action Plan	\$22,500																		
50	Grays Harbor County -- Lower Satsop Restoration & Protection (Keys Rd, etc.)	\$840,000																		
51	Hoquiam -- North Shore Levee West Segment	\$666,403																		
52	WDFW -- K1460 Lower Satsop River Design/Construction	\$450,000																		

<--10/17/2019