



Chehalis River Basin

*Reducing Flood Damage and
Restoring Aquatic Species*

6:30 p.m.

August 26, 2015

City of Aberdeen



Today's Presentation . . .

- Provide update, encourage discussion.

- Key messages . . .

1. **Broad agreement** -- For first time in a century there is progress across the Basin on next steps to reduce flood damage and enhance salmon, aquatic species.

2. **Basin-wide strategy** -- An action-oriented, multi-phased Basin-wide strategy is needed to protect communities along the river and to enhance aquatic species.

3. **Collaboration is key** -- WA Legislature, Governor's Office, Governor's Chehalis Basin Work Group, Chehalis River Basin Flood Authority, and WA Agencies all working together = Action!

4. **Fundamental principle** -- Solving one's problems doesn't increase another's.



Action . . .



↑
Photo Source: THE CHRONICLE →

August 2015

"Chehalis River Basin Flood Authority"

- **Formed in 2008**

- **Formal body focused on:** (1) flood hazard mitigation throughout the Basin; and (2) decision-making that is . . .
 - informed by science.
 - protective of Basin residents/communities.
 - environmentally appropriate.



- **Basin jurisdictions represented**

- ▶ Grays Harbor County
 - City of Aberdeen
 - City of Cosmopolis
 - City of Montesano
 - City of Oakville
- ▶ Lewis County
 - City of Centralia
 - City of Chehalis
 - City of Napavine
 - Town of Pe Ell
- ▶ Thurston County
 - Town of Bucoda

"Governor's Chehalis Basin Work Group"

- **Appointed by Gov. Gregoire (2012); Re-confirmed by Gov. Inslee (2013).**
- **Role = Develop/oversee Basin-wide strategy, funding authorizations (2015-17).**
 - Flood Retention Dam in paired with Airport Levee Improvements.
 - Basin-wide Aquatic Species Restoration.
 - High-priority, small-scale Local Flood Damage Reduction Projects.
 - Local Land Use Management and Local Floodproofing.
- **Members are:**
 - Vickie Raines (Grays Harbor Commissioner, Chair Flood Authority).
 - Karen Valenzuela (Former Thurston County Commissioner, Former Vice-Chair Flood Authority)
 - Don Secena (Chair Chehalis Tribe).
 - J. Vander Stoep (Private Attorney, Pe Ell Alternate Flood Authority).
 - Steve Malloch (Western Water Futures)
 - Jay Gordon (President Washington Dairy Federation and Chehalis Farmer).
 - Rob Duff (Governor's Natural Resources and Environment Advisor).

Background . . .

- 2007 Storm -- \$938M Basin-wide damage, \$300M lost economic activity (WA).



Exit 77 (I-5) in Chehalis
STEVE RINGMAN / SEATTLE TIMES



City of Centralia
STEVE RINGMAN / SEATTLE TIMES



← **Photos Source:** LEWIS COUNTY,
DIVISION OF EMERGENCY
MANAGEMENT



**State Route 6,
West of Adna**
MIKE
SALSBURY /
AP



Background . . .

- 2007 Flood -- I-5 and Hwy 507 Interchange looking South.

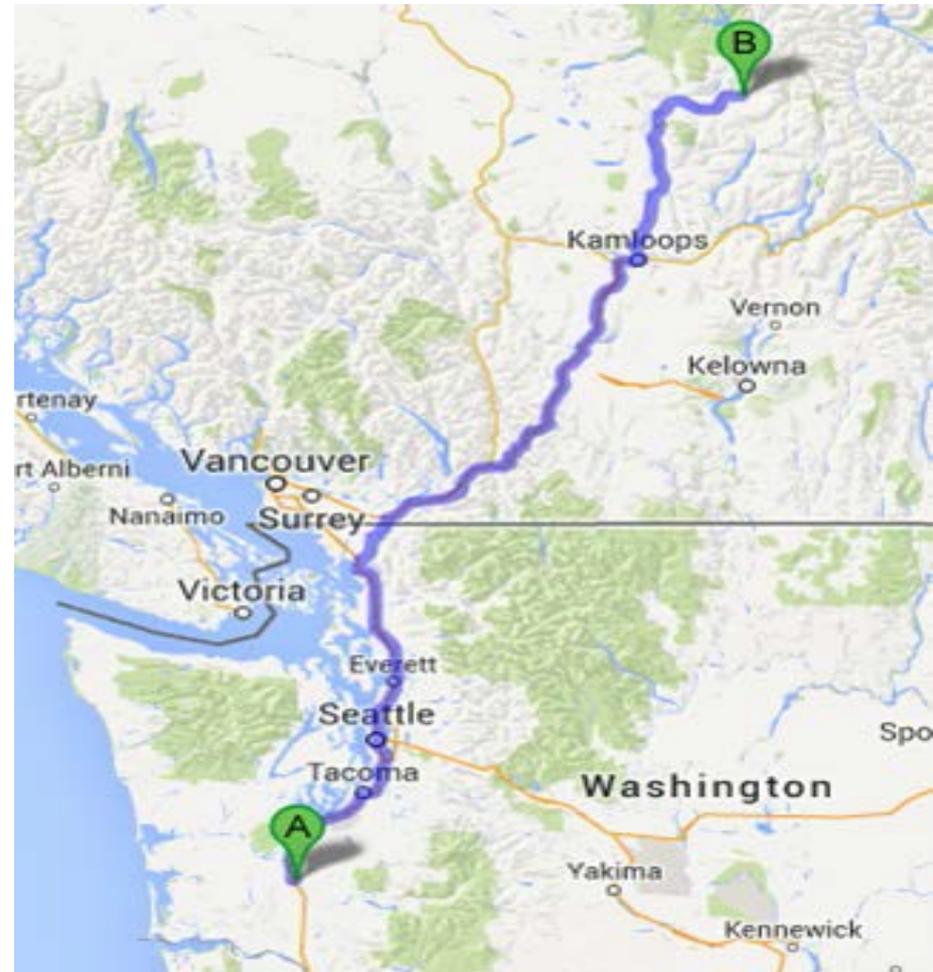


City of Centralia and I-5
STEVE RINGMAN /
SEATTLE TIMES

August 2015

Background . . .

- 289,983 acre feet of measured water (12/03-08/2007).
- Equivalent to covering roadway between Chehalis and North of Kamloops with 1 foot of water 1-mile wide or covering . . .
 - 80% of Kitsap County.
 - 69% of Clark County.
 - 59% of Thurston County.

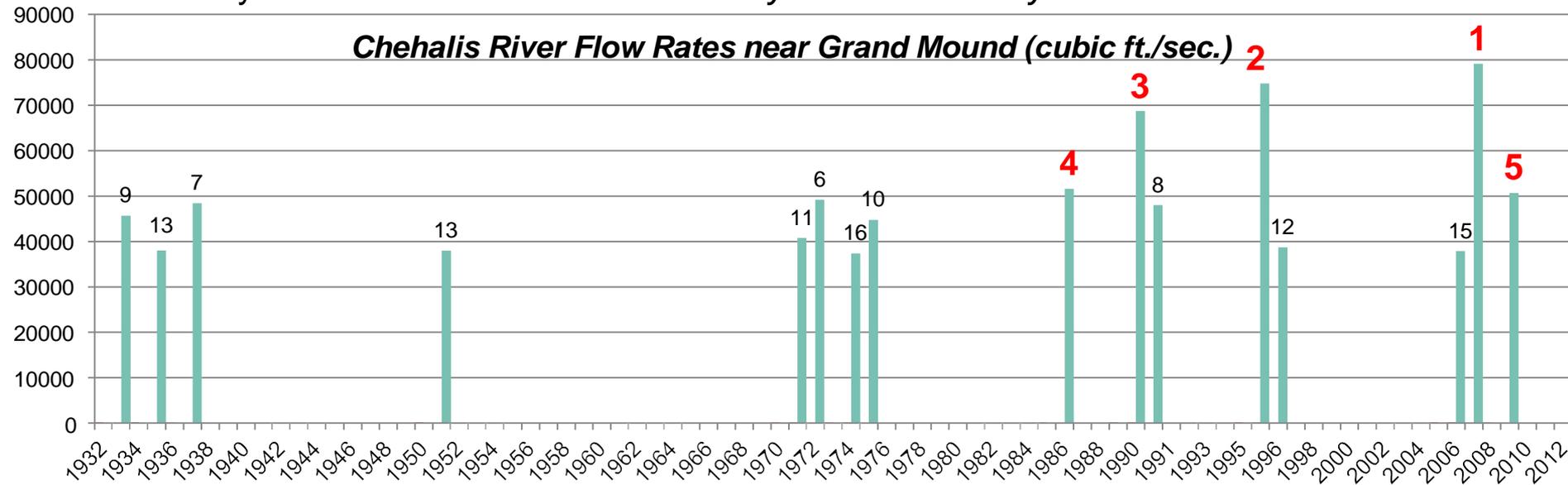


Background . . .

■ Ranked high flow events (1932 - 2012) . . .

- I-5 closed 1990, 1996, 2007, 2009.
- Five largest events since 1986 -- *Frequent floods are getting worse and damage is increasing . . .*
- 100 year flood estimate -- *Increased by 33% in last 30 years.*

Chehalis River Flow Rates near Grand Mound (cubic ft./sec.)



Background . . .

- Chehalis is the second largest river basin in the state, rich in natural resources . . .
- Salmon populations are 15-25% of historic levels.
- TMDL for the basin (<http://www.ecy.wa.gov/programs/wq/tmdl/ChehalisRvrTMDLSummary.html>).



Upper Chehalis (5/31/2010)
 JAMES E. WILCOX / WILD GAME FISH
 CONSERVATION INTERNATIONAL

~~~~~

## CHEHALIS BASIN SALMON & TROUT

### OCEAN PHASE

Chinook  
Coho  
Coho  
Steelhead  
Bull trout

The salmonid lifecycle involves adults maturing in the ocean, migrating back to their home streams and spawning, embryos incubating, fry emerging, juveniles growing, and smolts migrating to the estuary to acclimate to saltwater and moving out into the ocean

**WHAT SALMON NEED IN FRESHWATER HABITAT**

Cool, clean water

Appropriate water depth, quantity and flow velocities

Upland and riparian (stream bank) vegetation to stabilize soil & provide shade

Clean gravel for spawning and egg-rearing

Large woody debris to provide resting and hiding places

Adequate food

Varied channel forms

### SPAWNING PHASE

Chinook  
Coho  
Coho  
Steelhead  
Bull trout

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www.chehalisbasinpartnership.org

Background . . .

Salmon-habitat potential

Species	Current Spawner	Habitat Degradation
Spring Chinook Salmon	2,300	78%
Fall Chinook Salmon	24,317	45%
Coho Salmon	42,000	69%
Winter-run Steelhead	8,700	44%

Source: Chehalis Basin Strategy: Reducing Flood Damage and Restoring Aquatic Species; Pe Ell Public Meeting; 10/14/2014; Page 13.

Solution = Basin-wide Approach

Action-oriented, Multi-phased Approach

1. Basin-Wide Relationships
2. Hydraulic Understanding
3. Master Strategy (Game Plan)
4. Large Capitol Projects
5. Small-Scale Local Projects
6. Land Use, Floodplain Management
7. Restore Salmon and Aquatic Species
8. Early Flood Warning
9. Outreach, Education and Communication

Chehalis Basin Strategy: Reducing Flood Damage and Restoring Aquatic Species

For the first time—after over a century of catastrophic floods and hundreds of studies—broad agreement is building on a comprehensive strategy to reduce flood damage, restore salmon populations, and support the prosperity of communities in the Chehalis Basin.



The problems in the Chehalis Basin are real and action is being taken now to protect communities and restore aquatic species.

Frequent Floods Are Getting Worse and Damage is Increasing. The five largest floods in the Chehalis Basin history were in the mid-1900s, causing major damage to cities, property, businesses, farms, public facilities, roads, and bridges. Each of the recent Basin floods in the 1990s, 2000s, and 2010s came a change unlike from the history of flooding in the Chehalis Basin. In recent floods there have been flood areas over the flood plain, and major residential and major infrastructure that the cost of future floods will exceed \$2.5 billion in the next 50 years. For action to begin.



Salmon Populations Are Seriously Degraded and Continue to Decline. The natural resources of the Chehalis Basin have suffered because of the loss of riparian habitat and the loss of spawning habitat. The Chehalis Basin supports the natural resources of the Chehalis Basin, including the natural spawning habitat of spring chinook, steelhead, and coho salmon. The Chehalis Basin salmon populations are seriously degraded, with salmon populations at 15-20% of their historic levels. It is very probable that the current trajectory, coupled with the potential impact of climate change, would lead to the loss of salmon populations and a catastrophic loss of cultural values for tribal, community, and recreational fisheries. Industry and corporations of the Chehalis Basin have lost.

Changing the History of Inaction. For a century, there has been a failure to meaningfully address the real problems of catastrophic flooding and significant degraded riparian habitat in the Chehalis Basin. Over 200 years of potential actions to address flood damage have been considered, with no real change. The Chehalis Basin Flood Action Plan is the first in a series of actions that will reduce flood damage and restore the Chehalis Basin.

7/22/2015

Implementing a Comprehensive, Integrated Approach for Fish and Floods. An extensive evaluation of the potential social, technical, financial, and ecological impacts of flood damage reduction ideas. A November 2014 Chehalis Basin Flood Action Plan (CBFAP) was developed. It is supported by the Chehalis Basin Flood Action Plan (CBFAP) and the Chehalis Basin Flood Action Plan (CBFAP). The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration. These recommendations include:

- A concrete flood retention dam on the upper Chehalis River, paired with investments to the Chehalis Central Mainstem Restoration.
- Restoration of over 200 miles of Spring Chinook spawning and rearing habitat, removal of priority fish passage barriers, restoration of riparian habitat for aquatic species, and a comprehensive strategy to address riparian restoration.
- Investments in high-priority, low-cost flood damage reduction projects, with a replicable approach to be used as a model.
- Local government land use management actions to protect riparian floodplain functions, to provide flood warning, and floodproofing businesses and public structures to provide additional protection for residents and structures that are already located in floodways.

Over the next two years, the Washington State Department of Ecology—in consultation with the Washington State's offices, and other agencies and stakeholders—will set an agenda and set the terms and cost of the recommended packages of flood damage reduction and aquatic species restoration actions through implementation of the Chehalis Basin Flood Action Plan (CBFAP). The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration. The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration. The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration.

There is a broad opportunity for public engagement on this programmatic CDF.

- October 2015: public meeting and formal public comment period on the draft CDF document
- August 2016: public meeting and formal public comment period on the draft CDF document
- November 2016: public meeting and formal public comment period on the draft CDF document

The development of a programmatic CDF is a process that involves stakeholders and other interested parties with a broad and participatory forum in which to evaluate the interests to meet flood damage reduction and restoration goals. The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration. The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration. The Chehalis Basin Flood Action Plan (CBFAP) is a comprehensive approach to flood damage reduction and aquatic species restoration.



We are happy to answer questions or provide further information about the work in the Chehalis Basin. We can be reached through Facebook or Twitter at (206) 844-2245 or @washingtonstate.

7/22/2015

1. Basin-Wide Relationships



TOWN of BUCODA



WASHINGTON STATE
CONSERVATION
COMMISSION



Washington
Department of
**FISH and
WILDLIFE**



WASHINGTON STATE DEPARTMENT OF
Natural Resources



Office of Financial Management

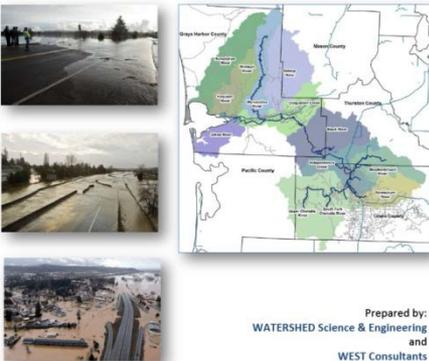
Better information. Better decisions. Better government.

August 2015

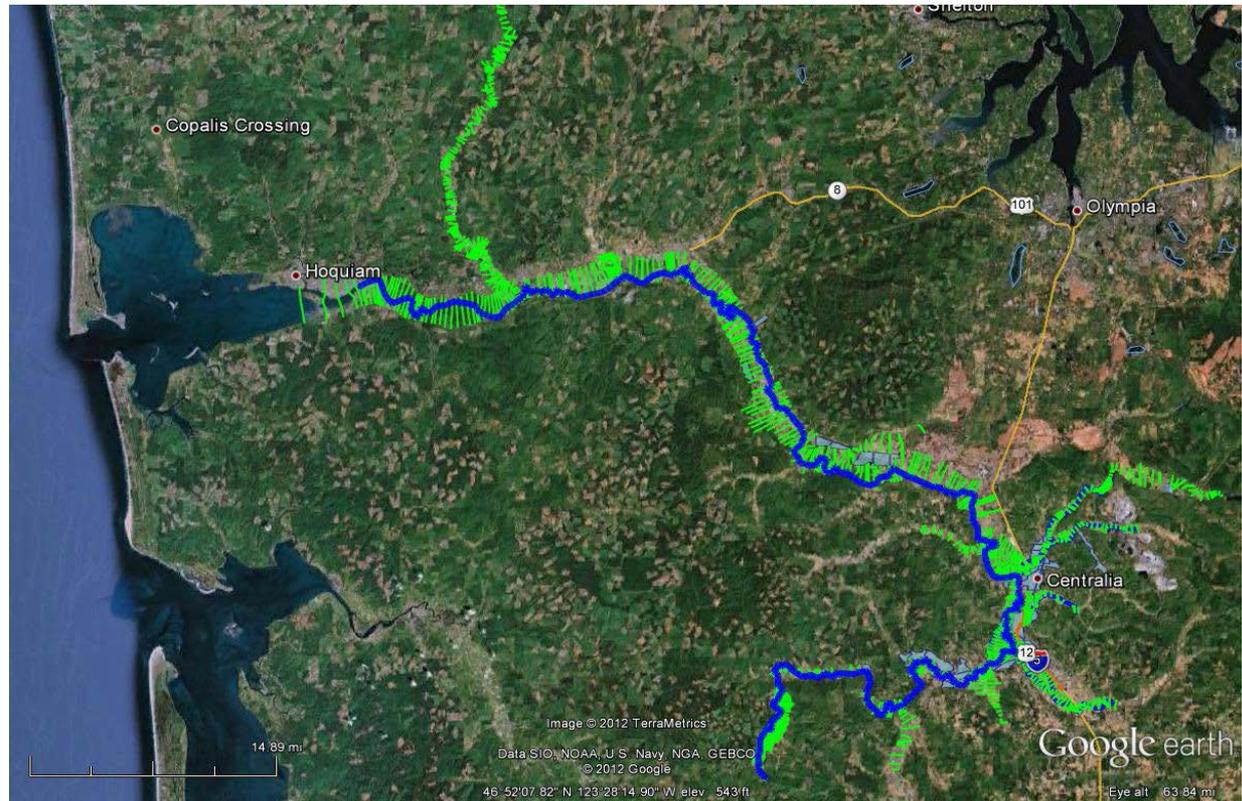
2. Hydraulic Understanding

- **Science-based model** -- To inform decision-makers on hydraulic effects of potential flood relief options (at basin-wide and localized scales).
- **108 miles** -- Mouth of Chehalis River upstream to Pe Ell (108 miles).

Draft Report - Chehalis River
Hydraulic Model Development Project



July 23, 2012



August 2015

2. Hydraulic Understanding

- **Example: Basin-wide effects analysis**
(Governor's Chehalis Basin Workgroup, 2014 Recommendations Report, 11/25/2014)

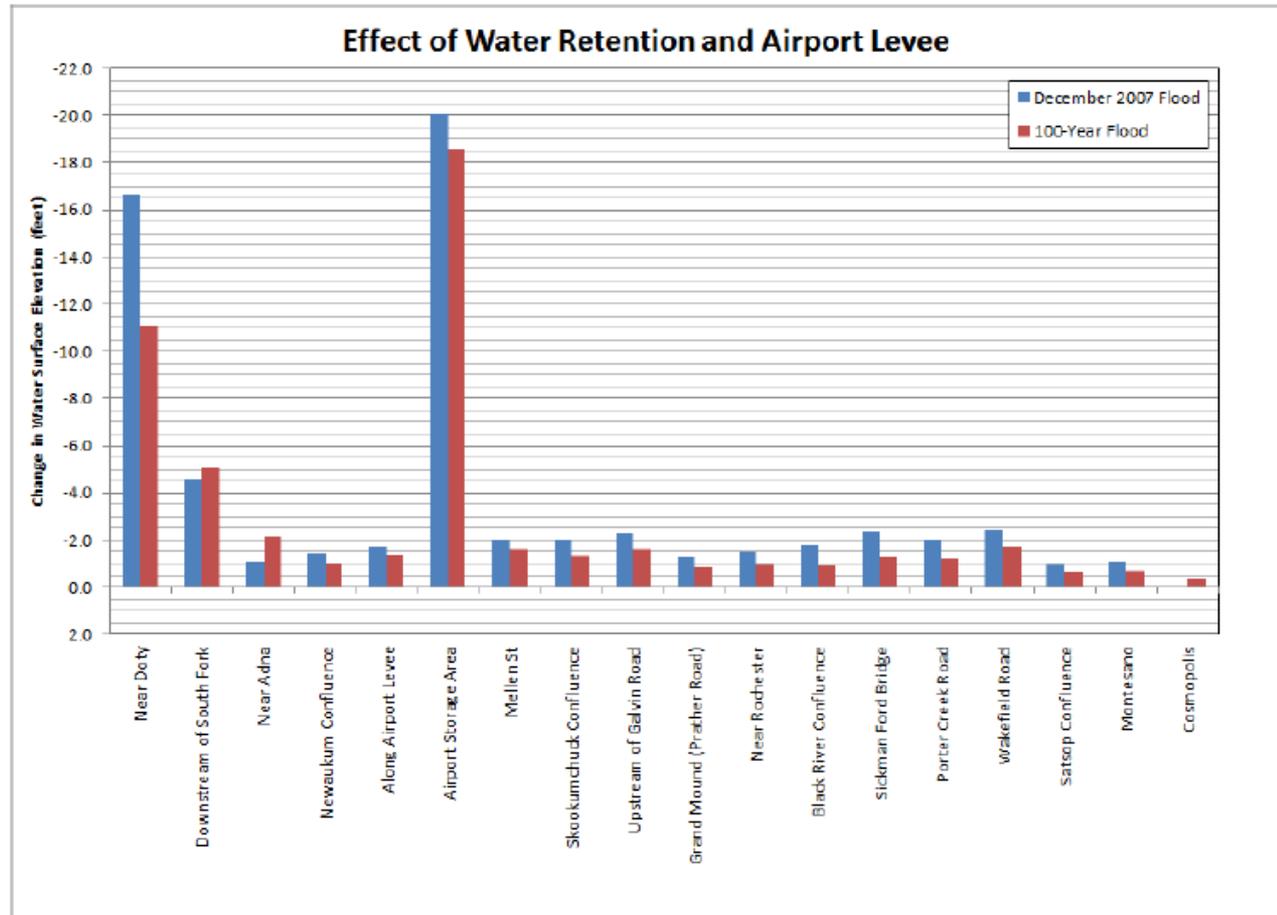


Figure 2: Predicted Changes in Water Surface Elevations from Water Retention and Airport Levee

For 80 years, little has come from efforts to reduce flood damage in the Chehalis Basin. Now, for the first time, there is a broadly-supported, Basin-wide process that is implementing long-sought local projects and leading to a comprehensive strategy to address flooding, while at the same time enhancing aquatic species across the Chehalis Basin.

The 2013 legislature funded a \$26 million program of



3. Master Strategy (Game Plan)

2012, 2013-15 – Framework and Recommendations.

Key elements:

1. Concrete Flood Retention Dam on upper Chehalis River.
2. Chehalis-Centralia Municipal Airport Levee Improvements.
3. Basin-wide Aquatic Species Restoration (100+ miles spawning/rearing habitat).
4. Local Flood-damage Reduction Projects, including raising homes, floodproofing businesses and public structures.
5. Local actions to Protect Floodplain Functions, ensure development doesn't exacerbate harm.
6. Cost = \$500-600M; Benefit = \$720M (100 yrs.); No Action = \$3.5B (100 yrs.).



CHEHALIS BASIN STRATEGY

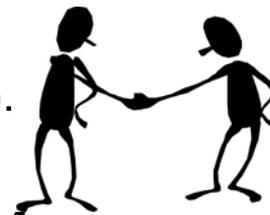
Governor's Chehalis Basin
Work Group

2014 Recommendation Report

Final November 25, 2014



2015-17 -- \$50M for formal environmental review, implementation of local early-action (projects, floodproofing, etc.).



4. Large Capitol Projects

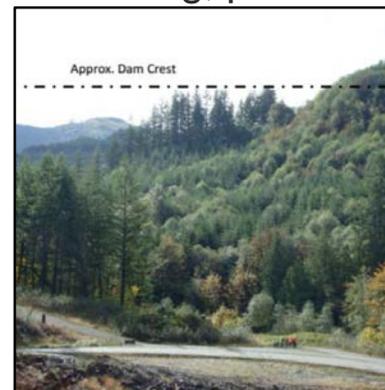
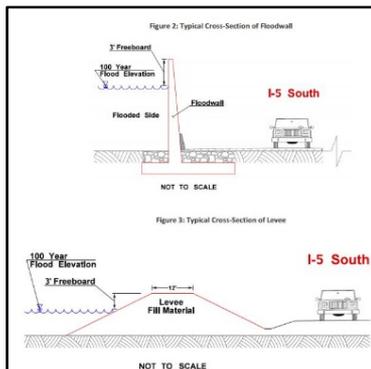


2013-15:

- ❑ Technical team developed baseline knowledge on safety, feasibility of Flood Retention Dam alternatives -- field visits, site and design considerations, world-wide research, etc.
 - Permanent reservoir (w/ fish passage) or Run-of-the-river (no permanent reservoir).
 - Roller compact concrete or Earthen fill.
 - Flood-control only or Multi-purpose.
- ❑ WSDOT evaluated I-5 Protection alternatives -- levees, walls, raise road, etc.

2015-17:

- ❑ Formal environmental review (Programmatic EIS) will be conducted to evaluate alternatives and inform Governor's Workgroup on next steps – funding, permitting, etc.



← Photo source:
ANCHOR QEA

August 2015



**Pe Ell Wastewater Treatment Plant
Flood Protection Dike**

**Aberdeen Proposed Northside
Dike/Levee**



5. Small-Scale Local Projects

2012 Supplemental Capital Budget:

- \$5.0M -- Local projects.

2013-15 Capital Budget:

- \$15.1M -- Local projects, aquatic species enhancement.

2015-17 Capital Budget:

- \$23.2M -- Local projects, habitat restoration.

New Projects:

- Boistfort Valley Water District -- Pre-Sedimentation Pond**
- Bucoda -- Mainstreet Regrade**
- Centralia -- China Creek**
- Chehalis -- Airport Pump**
- Chehalis -- Dillenbaugh Creek Realignment**
- Elma -- WWTP Outfall Stabilization Project**
- Montesano -- WWTP Wynoochee River Bank Protection Study**
- Napavine -- Kirkland Road Flooding Study**

Ongoing Projects:

- Aberdeen -- Northside Levee**
- Aberdeen -- Southside Dike/Levee Certification
- Chehalis -- Raise Airport Levee**
- Chehalis Tribe -- Allen Creek Restoration
- Chehalis Tribe -- Oxbow Lake Reconnection
- Chehalis Tribe -- Oxbow Reconnection at RM 70
- Cosmopolis -- Mill Creek Dam**
- Grays Harbor County -- Wishkah Road Floodwall Project**
- WA Department of Fish and Wildlife -- Satsop River Floodplain Restoration**

Local Capital Construction Projects
**Requesting 2015-17 Funding

CHEHALIS RIVER BASIN FLOOD AUTHORITY
7/24/2015



CHEHALIS RIVER BASIN FLOOD AUTHORITY
City of Montesano
Wastewater Treatment Plant Flood Prevention Dike

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 J
Parametrix

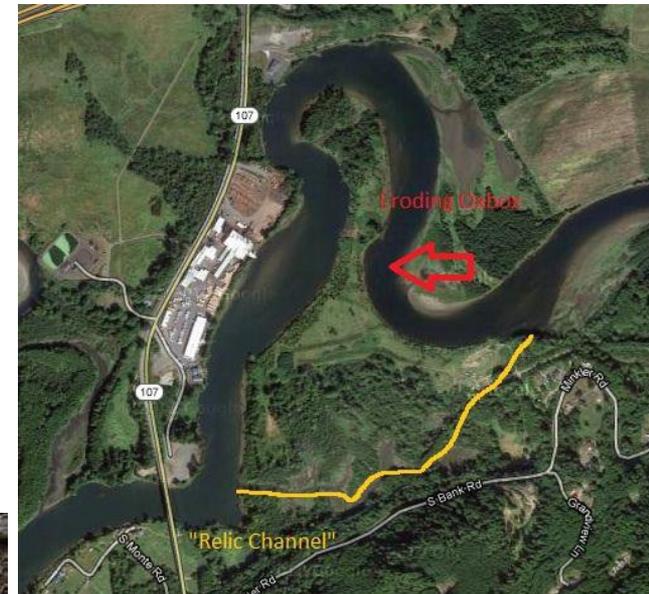


5. Small-Scale Local Projects



■ Mary's River Lumber Bank Stabilization Wall and WWTP Flood Prevention Dike

- ❑ Mary's River Lumber = 120 family wage jobs.
- ❑ State Highway (SR 107) = At risk of damage.
- ❑ Montesano WWTP = Risk of overtopping.
- ❑ Solutions and Alternative = Balance time, cost, results.
- ❑ Project [website](#).



CHEHALIS RIVER BASIN FLOOD AUTHORITY

City of Montesano
Home of the Tree Farms
www.montesano.com

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

5. Small-Scale Local Projects

Projects Completed
14:1 Return-on-investment!



Projects Completed
Local Protection!



- Completed Projects:**
- Bucoda -- Wellhead Protection Levee
 - Chehalis Tribe -- Flood Gate
 - Chehalis Tribe -- Sickman-Ford Overflow Bridge
 - Lewis County -- Adna Levee
 - Lewis County -- Replace Airport Levee (Phase 1)
 - Montesano -- Protect WWTP and Mary's River Industrial Property
 - Pe Ell -- WWTP Flood Prevention Dike

Local Capital Construction Projects Completed 2012-15 Funding

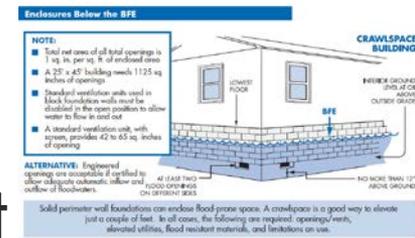


- Completed Farm Pads & Evacuation Routes:**
- ✓ 18 locations so far.
 - ✓ More 2015-17 (Grays Harbor, Thurston counties).
 - ✓ Save lives, livelihoods.
 - ✓ Benefit whole basin.
 - ✓ 14:1 return-on-investment.
 - ✓ Designed, permitted, constructed <2 years.
 - ✓ Reusable (again, again, again ...).

Farm Pads, Evacuation Routes Completed 2012-15 Funding



6. Land Use, Floodplain Management



❑ French and Associates under contract.



❑ 2013-15: Analyzed local floodplain management programs.

- Do they protect existing homes/businesses?
- Do they ensure new development does not increase flood hazard risk?
- Are there ways to reduce flood insurance rates?
- Are there repeatedly flood damaged properties that should be addressed?

❑ 2015-17: Advise Flood Authority, Governor's Workgroup, and Basin communities on:

- Retrofitting buildings to meet flood opening criteria.
- Identify home elevation projects.
- Improving local floodplain management programs.

**Chehalis River Basin
Basin-Wide Floodplain
Management Assessment**



November 30, 2014

F French & Associates, LTD.
2601 Havlicek Court
Steilacoom, WA 98588



7. Restore Salmon and Aquatic Species

Salmon:

- At 15-25% historic levels.
- Habitat substantially degraded.

2013-15:

- Collected data (aquatic species, water quality, hydrologic, etc.).
- Analyzed/modelled data to understand relationships (fish, wildlife, water quality, sediment, streamflow, flooding, etc.).
- Developed “Aquatic Species Enhancement Plan” (8/29/2014).

2015-17:

- Convene broad group to identify, implement early actions
 - Remove barriers to fish passage.
 - Restore off-channel habitat.
 - Address bank erosion.

Chinook Salmon
- Learn more -



Coho Salmon
- Learn more -



Steelhead
- Learn more -



Snorkel Surveys



Seine Collections

7. Restore Salmon and Aquatic Species

Other Fish and Aquatic Species



8. Early Flood Warning

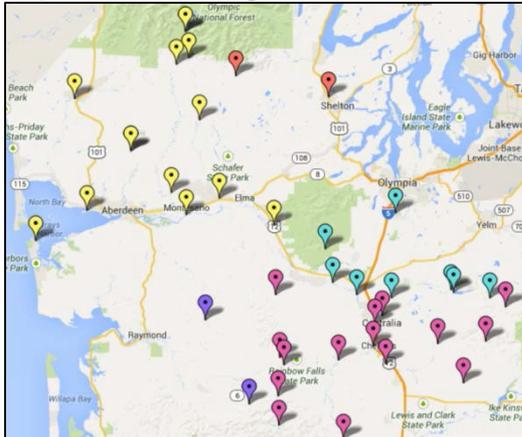
- www.chehalisriverflood.com
- Front-facing website.
- Data collection, data synchronization.
- Improved forecasting, early-warning.



Home <http://www.chehalisriverflood.com>

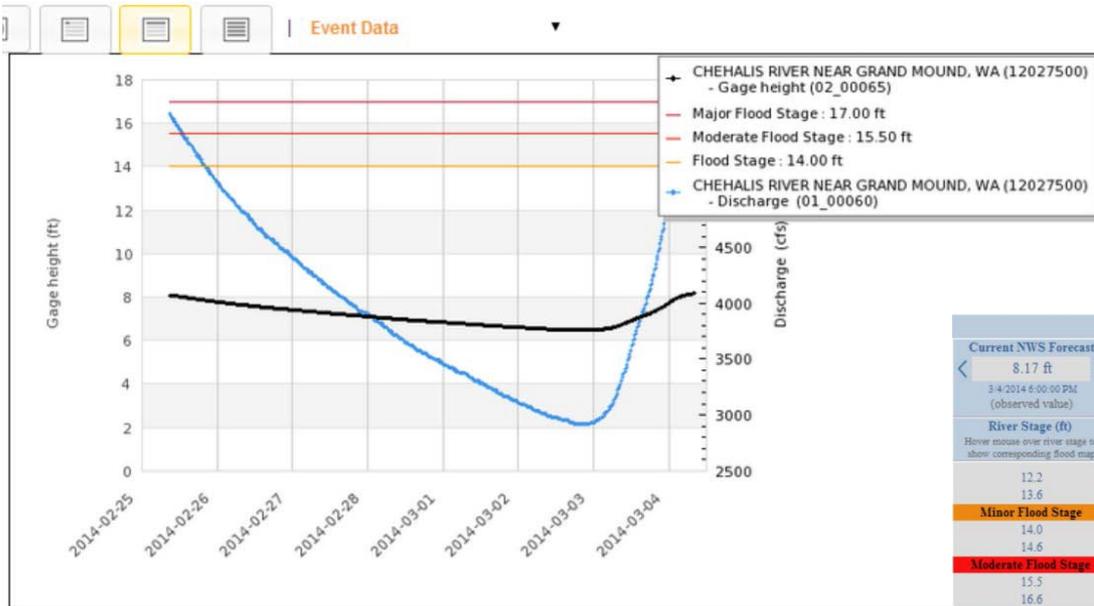
Chehalis River Basin Flood Authority

 Weather Forecast	 Rainfall Forecast	 River Forecast	 Flood Maps	 Gage Data Graphs
 Gage Data Maps	 Flood Authority News	 Road Conditions	 USGS Gages	 Help



8. Early Flood Warning

Localized tracking, forecasting . . .



Daily discharge, cubic feet per second -- statistics for Mar 4 based on 84 years of record [more](#)

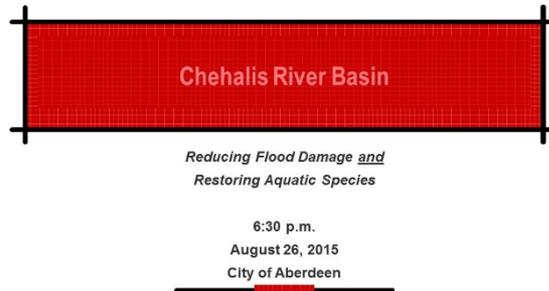
Min (2005)	25th percentile	Median	Mean	Most Recent Instantaneous Value Mar 4	75th percentile	Max (1987)
903	2340	3260	4670	5830	6340	22700

9. Outreach, Education and Communication

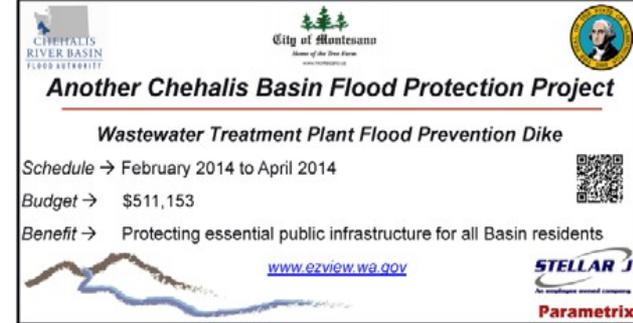
Website



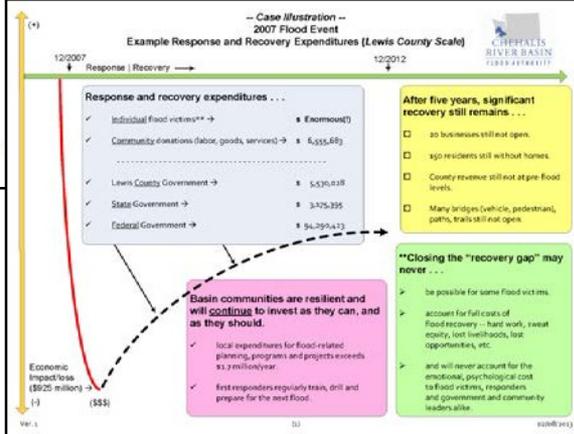
Outreach Visits



Project Signs



Informational Analyses



Chehalis Basin Flood Stories

Chehalis Basin Flood Stories

- [Farm Pads & Evacuation Routes](#)
- [Flood Warning System](#)
- [Local Capital Construction Projects](#)



9. Outreach, Education and Communication

<http://ruckelshauscenter.wsu.edu/projects/current-projects/chehalisfloodingfish/du/ChehalisFlooding.html>

WASHINGTON STATE UNIVERSITY

THE WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

Chehalis Basin Strategy

Chehalis Basin Work Group Recommendations Report

The Chehalis Basin Work Group has released its [2014 Recommendations Report](#), along with the [Technical Reports](#) referenced in the Work Group's 2014 Recommendations Report.

Read the [press release](#).

Read the [endorsement](#).

Project Description

The Chehalis River Basin and significant degradation and a failure to address the



Documents and Resources

www.ezview.wa.gov/aberdeenfloodrelief

EZ view Aberdeen Flood Relief [Portal ID #1825]

Overview

Aberdeen - Flood Relief Projects

Project Coordination and Transparency Portals	Managing Entity	Start Date
Aberdeen - Northside Levee Project	City of Aberdeen	07/26/2013
Aberdeen - Southside Dike/Levee Certification Project	City of Aberdeen	04/04/2013

Pictures



www.ezview.wa.gov/chehalisfloodauthority

CHEHALIS RIVER BASIN FLOOD AUTHORITY

EZview

Project: Chehalis River Basin Flood Authority (LPT#: 1492)

Search Documents Message

Home Local Projects Meetings Capital Budget 2013-15 Outreach & Education Gages & Stations Documents Contacts Library FAQs

THE CHEHALIS BASIN STRATEGY
Reducing Flood Damage and Enhancing Aquatic Species
(Click icon for 2014 strategy)

ANNOUNCEMENTS!!
(Click for latest news)

GIVE US YOUR FEEDBACK
(Click icon to provide feedback)

Current Flood Forecast
(Click icon for current river forecast)

CHEHALIS RIVER BASIN FLOOD AUTHORITY

GOVERNANCE
Staff Board
(CRBFA Governing Documents)

www.chehalisriverflood.com

Home

Information

Flood inundation maps for the Neenahum River near Chehalis are now available.
Chehalis - EZ View 2014 09:21:29
Click on the Flood Maps Area to see new flood inundation maps for the Centralia, Chehalis, Oly, and Skookum areas. Maps for Grand Mound and Puyallup will be available soon.

Links

- NEOS: Interactive River Site Map
- NEOS: Flood Authority Projects
- NEOS: Chehalis River Basin Flood Authority Website
- NEOS: LWR Strategic Plan
- Wagon Wheel: Emergency, Flood, Hurricane, County, Emergency, Hazards
- Wagon Wheel: Emergency, Hazard, Chehalis Basin, Radio
- Wagon Wheel: Chehalis Basin

Weather Forecast, Flood Forecast, River Forecast, Flood Maps, Gage Data Creation

Map Data View, Flood Authority News, World Conditions, USGS Gages, Help

Closing – 2007 Flood Damage . . .



Chehalis
River near
Doty
USGS

Closing – 2007 Flood Damage . . .



**Clearing Mud in
Curtis, WA**
STEVE RINGMAN /
SEATTLE TIMES

Closing – 2007 Flood Damage . . .



**Curtis, WA, Aftermath
of 7 Feet of Water**
STEVE RINGMAN /
SEATTLE TIMES

Closing – 2007 Flood Damage . . .



**Chandler Road Bridge
near Doty, WA**
STEVE RINGMAN /
SEATTLE TIMES

August 2015

Closing – 2007 Flood Damage . . .



August 2015

Closing – 2007 Flood Damage . . .



August 2015

Closing – 2007 Flood Damage . . .

I-5 Under Water
BRUCE ELY /
OREGONIAN



August 2015

Closing – 2007 Flood Damage . . .

Chehalis, WA
STEVE RINGMAN /
SEATTLE TIMES



August 2015

Closing – 2007 Flood Damage . . .



August 2015

Closing – 2007 Flood Damage . . .

**Jackson Street,
Centralia, WA**
STEVE RINGMAN /
SEATTLE TIMES



August 2015

Closing – 2007 Flood Damage . . .



I-5 Under Water
BRUCE ELY / OREGONIAN

August 2015

Closing – 2007 Flood Damage . . .



Photos Source:
WSDOT

August 2015

Closing – 2007 Flood Damage . . .



August 2015

Closing – 2007 Flood Damage . . .



Closing – 2007 Flood Damage . . .



**Wakefield Road,
Elma, WA**
GREG GILBERT /
SEATTLE TIMES

August 2015

For Further Information . . .

Vickie Raines, *Grays Harbor County Representative*

Chair, Chehalis River Basin Flood Authority

Member, Governor's Chehalis Basin Work Group

360/249-3731

vraines@co.grays-harbor.wa.us

Kathi Hoder, *Aberdeen Representative*

Chehalis River Basin Flood Authority

Chair, Flood Authority's Outreach and Education Committee

360/532-5912

licensing@techline.com

Jim Kramer, *Facilitator*

Chehalis River Basin Flood Authority

Governor's Chehalis Basin Work Group

206/841-2145

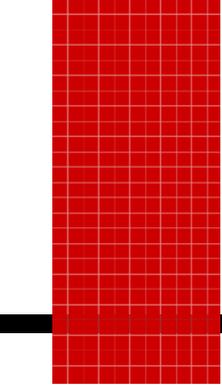
jkramer.consulting@gmail.com

Scott Boettcher, *Staff*

Chehalis River Basin Flood Authority

360/480-6600

scottb@sbgh-partners.com



Thank You . . .

Thank You!

Note:

This Presentation is Available at
“Chehalis River Basin Flood Authority” Website
at www.ezview.wa.gov/chehalisfloodauthority.

Email Distribution List

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August 2015