



June 30, 2014

TO: Lewis County Board of County Commissioners

FROM: Scott Boettcher, Staff, CRBFA (360/480-6600, scottb@sbgh-partners.com)

SUBJECT: Brief Update of Flood Hazard Reduction Activities in the Chehalis Basin

1. Local Projects Completed (<i>or completed by flood season</i>) • Adna Levee • Bucoda Water Supply Levee • Montesano WWTP Levee • Chehalis Tribe Sickman-Ford Overflow Bridge • 5 Livestock and Equipment Pads • 2 Livestock Evacuation Routes • 10 Additional Livestock/Equipment Pads • 2 Capacity Expansions For Existing Pads • 1 Evacuation Route • Montesano Sheet Pile Wall • Airport Levee Phase IA • Pe Ell WWTP Protection Levee • Map = http://goo.gl/maps/Vq8YY	2. Local Projects Proposed for Further Review/Evaluation/Costing**: • Kirkland Road Flooding Study • SR6 Bypass and Road Raise • Dillenbaugh Creek Realignment • Chehalis Main Street Regrade • Salzer Creek • Preliminary designs/costs (Summer 2014) • Map = http://goo.gl/maps/QqnV5
3. Aquatic Species Enhancement**: • Salmon populations are 15-25% of historic levels • Evaluating habitat enhancement options, benefits, costs (barrier removal, riparian enhancement, water quantity/quality, etc.) • Preliminary plan (Summer 2014)	4. Upper Basin Retention Structure**: • Evaluating options, benefits, costs, impacts: ○ Flood Retention only ○ Multipurpose (fish, water, hydro) • Preliminary design (Summer 2014)
5. I-5 Protection**: • Evaluating protecting I-5 with walls, levees, berms • Dropped raising or relocating I-5 • Preliminary design (Summer 2014)	6. Flood Proofing**: • Evaluating options, benefits, costs of flood proofing residential, commercial, agricultural structures in floodplain. • Compare costs w/ and w/out Dam (Summer 2014)
7. Basin Relationships/Partnerships: • Very strong	8. Looking Ahead: • Sept. 2014 – Technical, policy, public workshops • Nov. 2014 – Recommendations to Gov/Leg

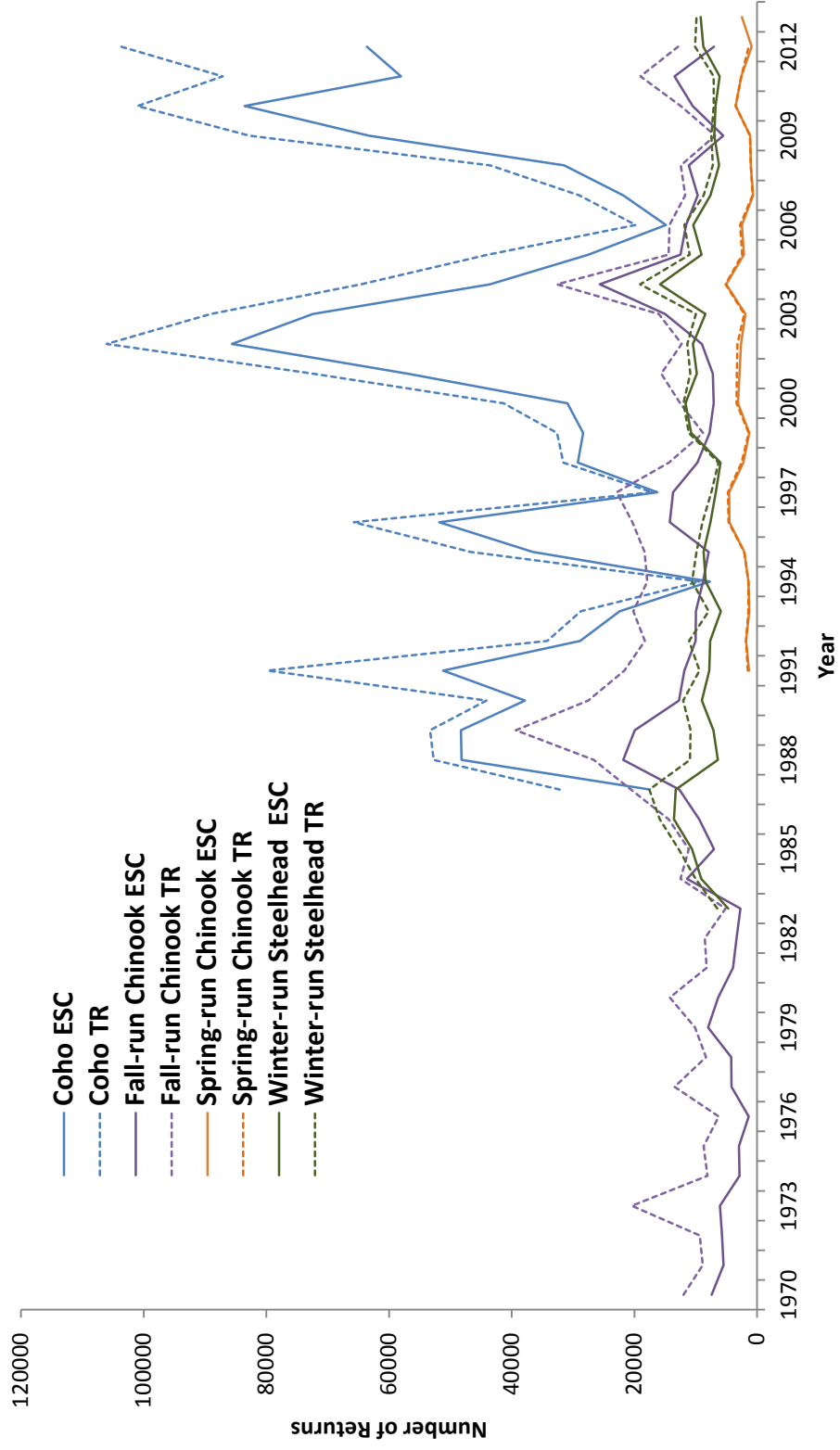
Outreach and Education Presentation: https://www.ezview.wa.gov/site/alias_1492/34490/outreach_education.aspx

May 2014 Public Meeting: https://www.ezview.wa.gov/site/alias_1492/34798/meetings_2013-15.aspx

Local Project Construction Photos: https://www.ezview.wa.gov/site/alias_1492/35040/Default.aspx

Salmon Runs

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Other Fish and Aquatic Species

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Flood Retention Only Reservoir

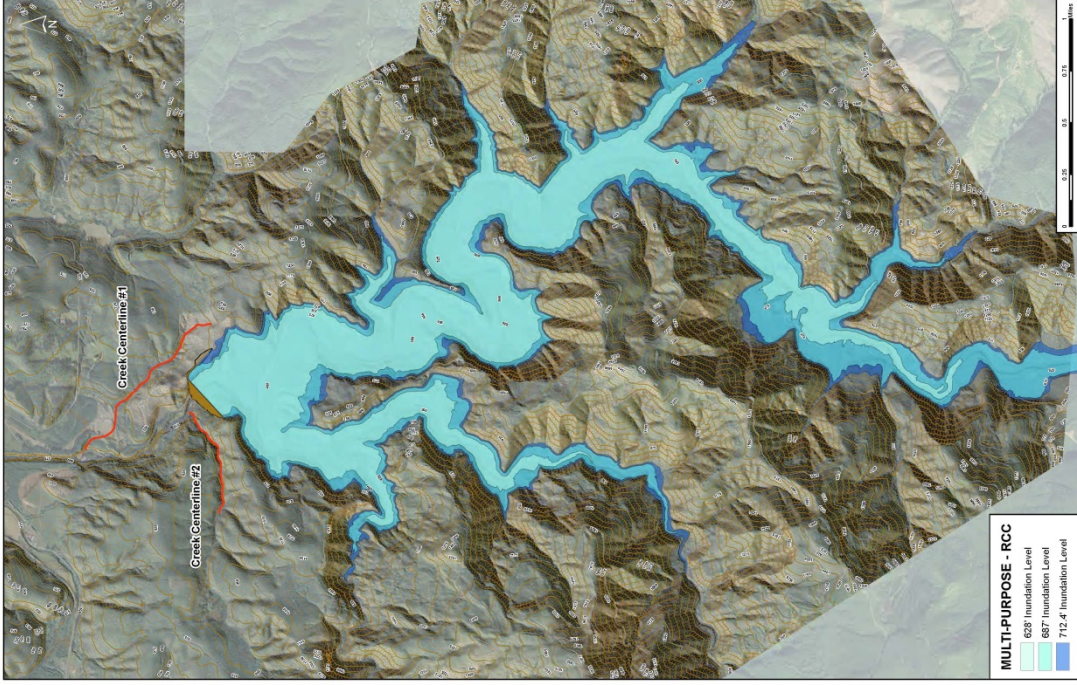
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- Dam Height = 227'
- Spillway Crest Elev. = 628
- Dam Crest Elev. = 654
- Area = 860 Acres
- River Inundation Length = 6.8 mi
- Maximum Storage = 65K acre/feet

Multi-purpose Reservoir Overview

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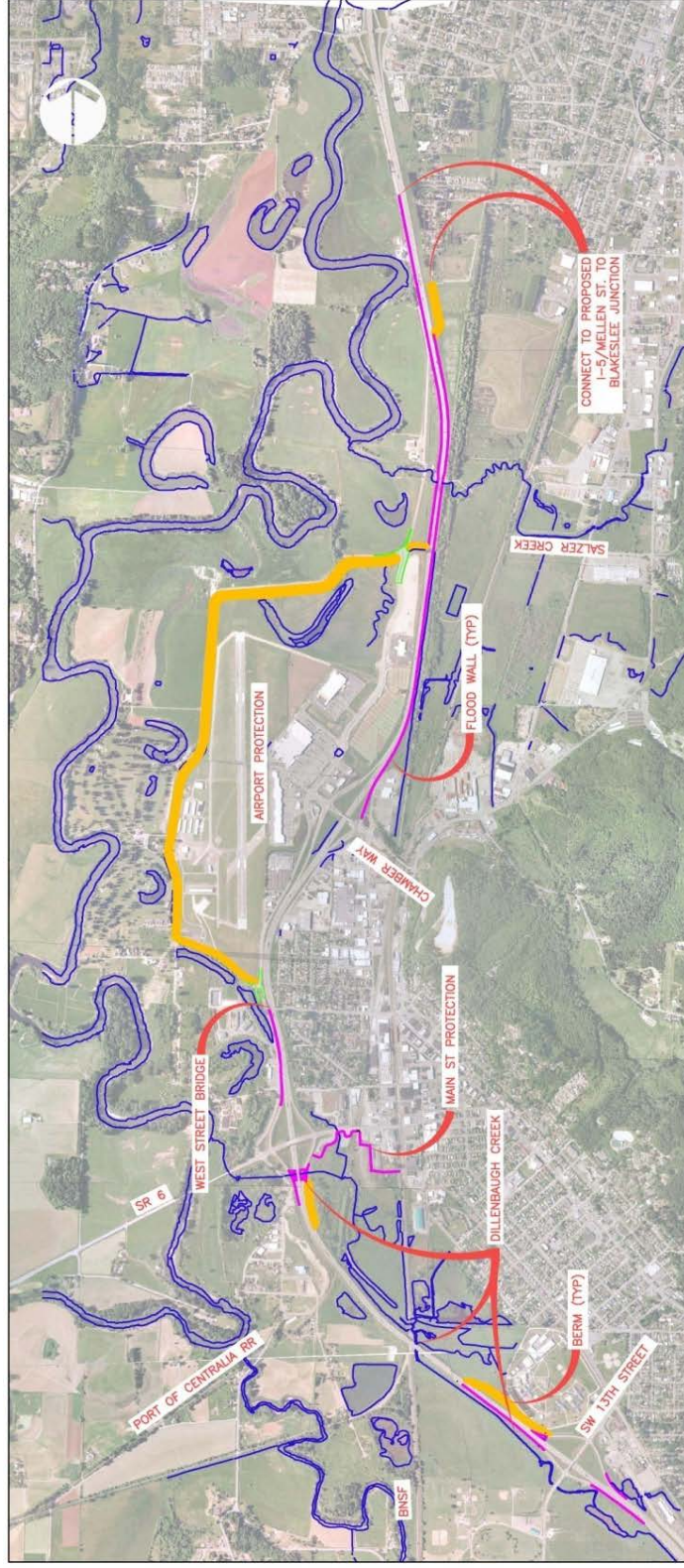


- Dam Height = 287'
- Spillway Crest Elev. = 687
- Dam Crest Elev. = 714
- Area = 1,307 Ac
- River Inundation Length = 7.5 mi
- Maximum Storage = 130K acre/feet

Protect I-5 with walls and levees

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Project Cost: \$ 80 – 100 Million



Floodproofing - Structures Affected

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Summary of Structures At Risk of Flooding in Chehalis River Floodplain								
Number of Structures	Baseline				With Dam and Airport Levee			
	Dec 07	500-Year	100-Year	20-Year	10-Year	Dec 07	500-Year	100-Year
Flooded	2040	3645	1384	372	175	753	2031	821
>1.0 feet	1368	2743	829	167	83	432	1306	459
>2.0 feet	820	1926	489	76	28	241	762	241
>3.0 feet	470	1159	293	22	7	139	471	117
>4.0 feet	263	657	155	6	2	65	300	54
>5.0 feet	159	385	76	1	0	28	158	25
Assessed Value of Improvements Inundated (\$Million)	\$238	\$411	\$137	\$30	\$13	\$64	\$206	\$73
Cost to Floodproof all Inundated Structures (\$Million)	\$146	\$273	\$92	\$20	\$9	\$46	\$149	\$50
Residential (\$ Mil)	\$107	\$205	\$57	\$10	\$4	\$28	\$101	\$28
Commercial (\$ Mil)	\$26	\$44	\$21	\$6	\$3	\$11	\$26	\$12
Agricultural (\$ Mil)	\$13	\$24	\$14	\$4	\$2	\$7	\$22	\$10

1. Basin-Wide Relationships

