

**Chehalis River Basin Flood Damage Reduction
2013-2015 Capital Budget
Approved by Legislature in June 2013**

1. Design alternatives for large capital flood projects (basin-level water retention and Interstate 5 protection)	\$9,200,000
2. Construct priority local flood protection projects	\$10,742,000
3. Construct local multipurpose projects that reduce flood damage and benefit fish	\$4,350,000
4. Reduce damages to residential and other structures in the floodplain	\$1,750,000
5. State agency technical assistance and project permitting	\$950,000
6. Basin program and project management	\$1,210,000
TOTAL	\$28,202,000

1. Design alternatives for large scale capital flood projects (basin-level water retention and Interstate 5 protection) (\$9,200,000)

(\$5,600,000) Design alternatives to determine permit feasibility, engineering safety and mitigation requirements for an optimum upstream water retention facility. By December 2014, the work will support a final policy decision on whether to proceed to permitting a water retention facility as a preferred alternative. Planned work will include:

- Engineering analysis of alternatives, including fish passage requirements.
- Hydrology and hydraulic analyses to define inundation and protection levels.
- Quantified environmental impacts to, and mitigation requirements for, fish, water quality and sediment transport.
- Updated costs and benefits of the alternative designs.

(\$3,350,000) Design and engineering analysis on four alternatives for protecting Interstate 5, the airport and key urban areas of Centralia and Chehalis. The work will identify a recommended I-5 flood protection alternative “for budgetary purposes” (one step short of a final NEPA/SEPA preferred alternative). Planned work will include:

- Preferred designs, and scope, schedule and estimated costs, provided for both with and without upstream water retention.
- Preferred designs evaluated in relation to the State’s plan to add capacity to I-5 on the same five mile stretch of the Interstate – by looking at three timing scenarios: I-5 flood project completed before, concurrent with, and after I-5 widening.

(\$250,000) Evaluate the extent of flood damage reduction that could be achieved through a Basin-wide program of smaller-scale projects, as required for the alternative analysis of the large capital flood projects. Describe the relative contribution to flood damage reduction from channel dredging, riparian wetland restoration, forest practices, flood easements on farm lands, road maintenance, removing bridges and constrictions, and removing, protecting, or avoiding floodplain development.

2. Construct priority local flood protection projects (\$10,742,000)

Local flood protection projects to protect key infrastructure, and priority commercial and residential areas, were initially identify, evaluated and prioritized by the Chehalis River Basin Flood Authority. Their list included a balance of projects throughout the Basin, with both Tier 1 (highest priority) and Tier 2 (other important projects) lists. The Authority’s Tier 1 list of priority projects was modified by the Governor’s work group, prior to submittal to the Governor, and then further amended by the Governor’s Office.

The following priority projects are proposed for the 2013-2015 biennium:

LOCATION	PROJECT	2013-2015 ACTION	BENEFIT	COST
Grays Harbor County	Satsop River Floodplain Restoration (Jobs Act proviso'd project)	Complete permitting, construction – remove artificial barriers to meandering river, stop shoreline erosion	Protects 8 agricultural landowners / businesses, and restores floodplain habitat	\$510,000
Grays Harbor County	Elma-Porter flood mitigation project	Design and permit of overflow bridge on Wakefield Road; and installation of culvert in Porter Creek.	Protects 12 homes from flooding. Provides safe passage to hundreds of workers from the Satsop Business Park, commercial farms and Briggs Nursery	\$584,000
Grays Harbor County	Wishkah Road (Kersh) flood levee	Final design, permitting, construction, land acquisition, and home elevation	Provides safe passage, and emergency service access, to 60 homes. Provides flood storage and	\$2,642,000

			floodplain restoration	
Aberdeen	Market Street Dike	Preliminary engineering design, costing, final design and construction – dike improvements	Protects: 80 residences 5 businesses Local adjacent streets	\$670,000
Aberdeen	Wishkah River East Bank Dike and Dike Behind Burger King (Jobs Act project)	Final design and construction – dike improvements	Protects: 30 residences 30 businesses State Highway 101 and local streets	\$410,000
City of Cosmopolis	Mill Creek Dam Improvements	Design, engineering and construction to repair damaged dam	Protects: 325 residents and 130 homes in Cosmopolis 200 residents in South Aberdeen 2 significant businesses (Western Peterbuilt /25 employees, and D4 Sports / 7 employees)	\$2,250,000
Montesano	Mary's River Lumber Bank Protection (Jobs Act project)	Final design, permitting and construction – flood water passage, shoreline protection	Protects: 120 jobs at Mary's River Lumber Mill State Highway 107 (bridge) Montesano Municipal Waste Water Treatment Plant.	\$2,000,000
Bucoda	Bucoda Levee Improvement Project (Phase II)	Phase II -- Final design and construction – flood wall and	Protects: Bucoda wellhead and drinking water system	\$305,000

	(Jobs Act proviso'd project)	levee	(sole source of Town's water for drinking and firefighting)	
Town of Pe Ell	Pe Ell wastewater treatment plant	Flood dike to protect wastewater treatment plant	Prevent raw sewage from entering the river during flooding	\$521,000
WA Conservation Commission and Basin conservation districts	Livestock and farm equipment pads and safe evacuation routes	Design, permitting, construction of pads and escape routes	Protects: Farm livestock and equipment Public health as a result of fewer dead animals in the event of a major flood	\$850,000 *
			13-15 TOTAL	\$10,742,000

(* NOTE: This funding includes a geomorphic analysis to help site the evacuation routes and critter pads away from the migration zones of the river. The analysis will help site other floodplain, multipurpose projects.)

3. Construct local multipurpose projects that reduce flood damage and benefit fish (\$4,350,000)

Projects that would provide benefits for flood damage reduction and for environmental enhancement were also evaluated and prioritized. These “multipurpose” projects were further sorted by the Governor’s work group, with three projects recommended for initial implementation. Concurrently, the group recommended the development of a coordinated Basin-wide salmon recovery strategy, to guide selection of future multipurpose projects, and to identify mitigation options for other flood projects, where needed.

The following projects were prioritized for implementation:

PROJECT	DESCRIPTION	13-15 ACTION	BENEFIT	COST
Allen Creek Restoration - along Case Road, just south of 113th Ave. SW, between Littlerock and Maytown	Restore natural functions to the Allen Creek floodplain. Slow the creek down and restore more natural flood flow paths and flood storage. Improve 2100 feet of salmon habitat in the Scatter Creek Watershed.	Design and construct	Environmental benefits for fish and wildlife. Channel reconnection and riparian restoration can store and attenuate flood flows.	\$990,000
Near RM 78 on the Chehalis River	Oxbow reconnection with mainstem of the Chehalis River, with side channel and floodplain storage enhancement. Enhance low elevation areas, side channels, and floodplain habitat with vegetated benches and large woody vegetation.	Design and construct	Riparian cover and off-channel storage store and attenuate flood flows.	\$861,000
Oxbow Lake Reconnection	Oxbow reconnection, riparian restoration of 75 acres, install large woody debris	Design and construct	Increased flood storage and attenuation in floodplain. Winter rearing for fish.	\$1,149,000
Chehalis River Basin	Basin-wide salmon enhancement strategy, with objectives, targets and priority projects	Identify multipurpose projects	List of priority projects for flood mitigation and fish enhancement work in the Basin	\$1,350,000
			TOTAL	\$4,350,000

4. Reduce damages to residential and other structures in the floodplain (\$1,750,000)

Implement a strategic program of buyouts and flood proofing for structures that have recurring damage requiring frequent public and private expenditures for repairs after flood events, including development of local damage curves for structures in the floodplain. (Match funding will be requested from the federal government.)

5. State agency technical assistance and project permitting (\$950,000)

The following agencies have substantive roles in the above work:

- Transportation (I-5 protection)
- Ecology (dam safety, water quality, wetlands, floodplain management)
- Fish and Wildlife (fish impacts/enhancement)
- Commerce (land use/local buyout projects)
- Natural Resources (geomorphic analysis)

6. Basin Program and Project Management (\$1,210,000)

- Managing the design and construction work listed above
- Facilitating the Governor's work group
- Convening and facilitating the dam and fish technical committees
- Facilitating the Flood Authority (including the local buyout/floodproofing projects)
- Ongoing intergovernmental coordination