

Levees, Diversion, and Conveyance

The Chehalis Basin Board is considering whether to recommend a series of levees, diversion, and conveyance projects in the upper basin near and outside of the cities of Chehalis and Centralia. The options were generated by the Local Actions Non-Dam Alternative (LAND) process and additional technical analyses are underway to determine the optimal type, alignment, and height of the LAND's conceptual levee, diversion, and conveyance projects.

Potential Principles

- **Principle 1:** If the Chehalis Basin Board supports advancing any of the levees, diversion, and conveyance projects as part of a long-term flood damage reduction strategy, construction would be subject to available funding, permit approvals from local, state, and federal regulators, and support from local jurisdictions in which the project would reside (in the form of project sponsorship, local matching funds, etc.).
- **Principle 2:** ASRP implementation is not meant to serve as mitigation for aquatic species impacts associated with any large-scale flood damage reduction actions being considered for the Chehalis Basin Strategy. If ASRP restoration or protection projects are included as mitigation for impacts from flood damage reduction actions, they should no longer be counted towards ASRP "results." In such cases, alternative ASRP projects may need to be identified to compensate for the reduction in anticipated benefits.
- **Principle 3:** If constructed, the project(s) would need to be paired with other structural and nonstructural flood damage reduction measures to create a comprehensive long-term flood damage reduction approach.

Key Components

The flood damage reduction project options that are being further analyzed and developed and would ultimately be considered by the Board are:

- Levees:
 - New ring levee in Adna around the new high school and commercial area
 - New levee on the north bank of the Newaukum River east of I-5
 - New and expanded levees on the north and south sides of the Skookumchuck River within Centralia
 - New levee on the north bank of the Chehalis River from north of Fort Borst Park downstream to Galvin Road
 - New levees on the north and south sides of China Creek from I-5 to the railroad tracks east of N. Railroad Ave
 - New levee on the east side of I-5 from China Creek south to Salzer Creek then east along the north side of Salzer Creek until tying into high ground near Kresky Ave.

- Expand and raise the existing levee to provide flood protection to the Chehalis-Centralia Airport area
- Diversion:
 - Constructing a new 700-foot wide, one-mile-long flow diversion by excavating approximately 1.3 million cubic yards of soil west of existing Mellen Street.
- Bridge:
 - Removing the existing Mellen Street Bridge and reconstructing it about 2,000 feet to the south, to connect Military Road west of the Chehalis River and I-5.
- Conveyance:
 - Removing about 1.3 million cubic yards of soil along the right (east) bank of the Chehalis River, immediately upstream from the existing Mellen Street Bridge and for approximately 3,000 feet downstream of the existing Bridge to increase the ability of floodwaters to flow through this constricted area

The projects outlined above may be modified over the course of the additional technical analyses currently underway. All options would construct any associated improvements to minimize impacts to transportation corridors, e.g., I-5, Mellen Street, state highways 6 and 12, etc. and would implement any associated mitigation actions.

Cost

Total estimated 30-year cost range: \$450,000,000-\$1,300,000,000 (construction only)

The “low” end reflects the low cost estimate for new and expanded levees only (estimated at \$450,000,000-\$600,000,000), while the “high” end reflects the sum of the high estimated for both the new and improved levees as well as the diversion and conveyance (the latter being estimated at \$500,000,000-\$700,000,000). Cost estimates include construction and/or modification of the levees, and in the case of the “high end,” would also cover the excavation and construction of the diversion and conveyance channels, removal and reconstruction of the Mellen Street Bridge, relocation of utilities and public facilities, and the acquisition of affected properties.¹ Costs of additional contractor-supported technical studies, engineering and design, permitting, and direct costs of mitigation activities as well as ongoing operations and maintenance of levees, diversion, and conveyance facilities if built are not included in these estimates. A total lifecycle cost analysis for the levees, diversion, and conveyance options has not yet been completed.

Levee cost estimates are based on historic bids for similar project types in Washington state, including the Hoquiam and Aberdeen North Shore Levee project and the Mount Vernon Flood Wall. Based on these projects, a \$20,000,000/mile cost is assumed.

¹ Local Actions Non-Dam Alternative Final Report (still in review), prepared by MIG, expected 2024, pp. 90-91.

Note that these planning-level cost estimates are preliminary and will likely be updated after additional analysis and refinement is completed and the options reach 10% design, currently underway by consultants under contract with the OCB.

More Information

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Refer to [the Local Actions Non-Dam Alternative \(LAND\)](#) page of the Chehalis Basin Strategy website for more details.