

Chehalis Basin Strategy

Reducing Flood Damage and Enhancing Aquatic Species

Alternatives for Reducing Flood Damage

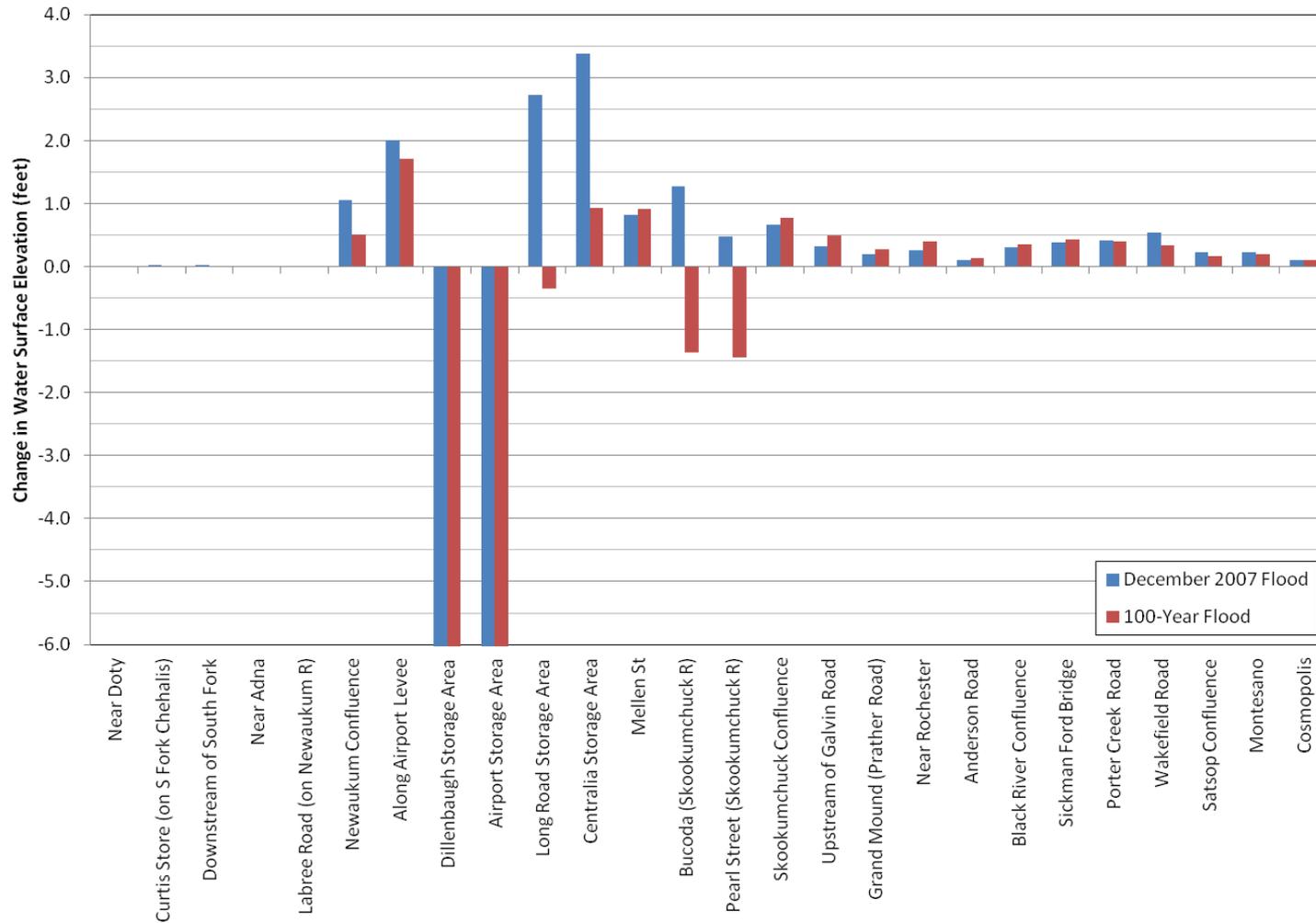
Policy Workshop
November 13, 2013



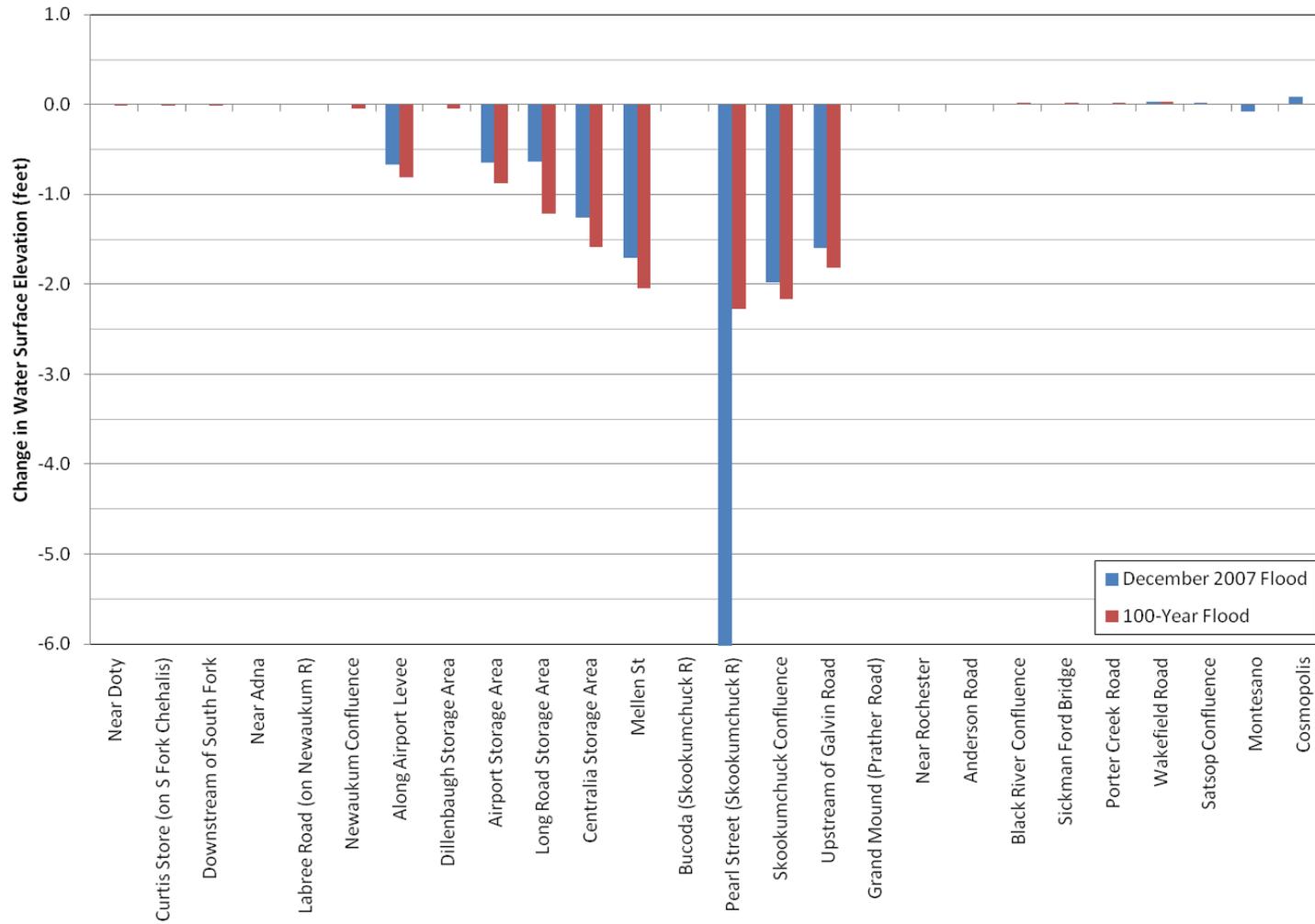


Major Projects Investigated in the Past

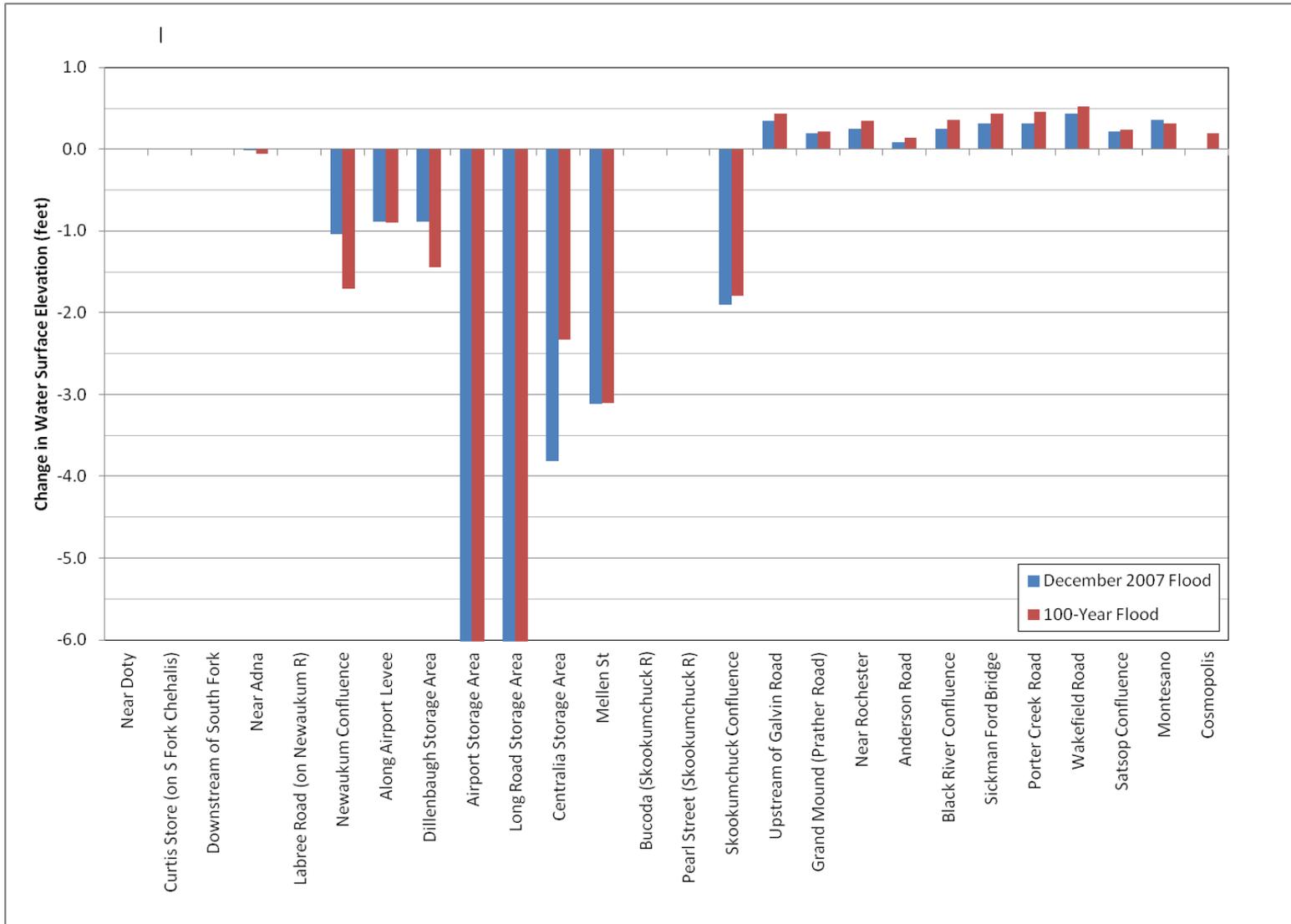
- Large Scale Capital Projects
 - Skookumchuck Dam
 - Corps of Engineers Twin Cities Project levees
 - Dredging
 - Alleviating constrictions from roads and bridges;
 - Twin Cities Flood bypass -Mellen Street and near Schuber Road in Centralia and Chehalis.
 - Water retention on mainstem
 - Flood walls to protect Interstate 5



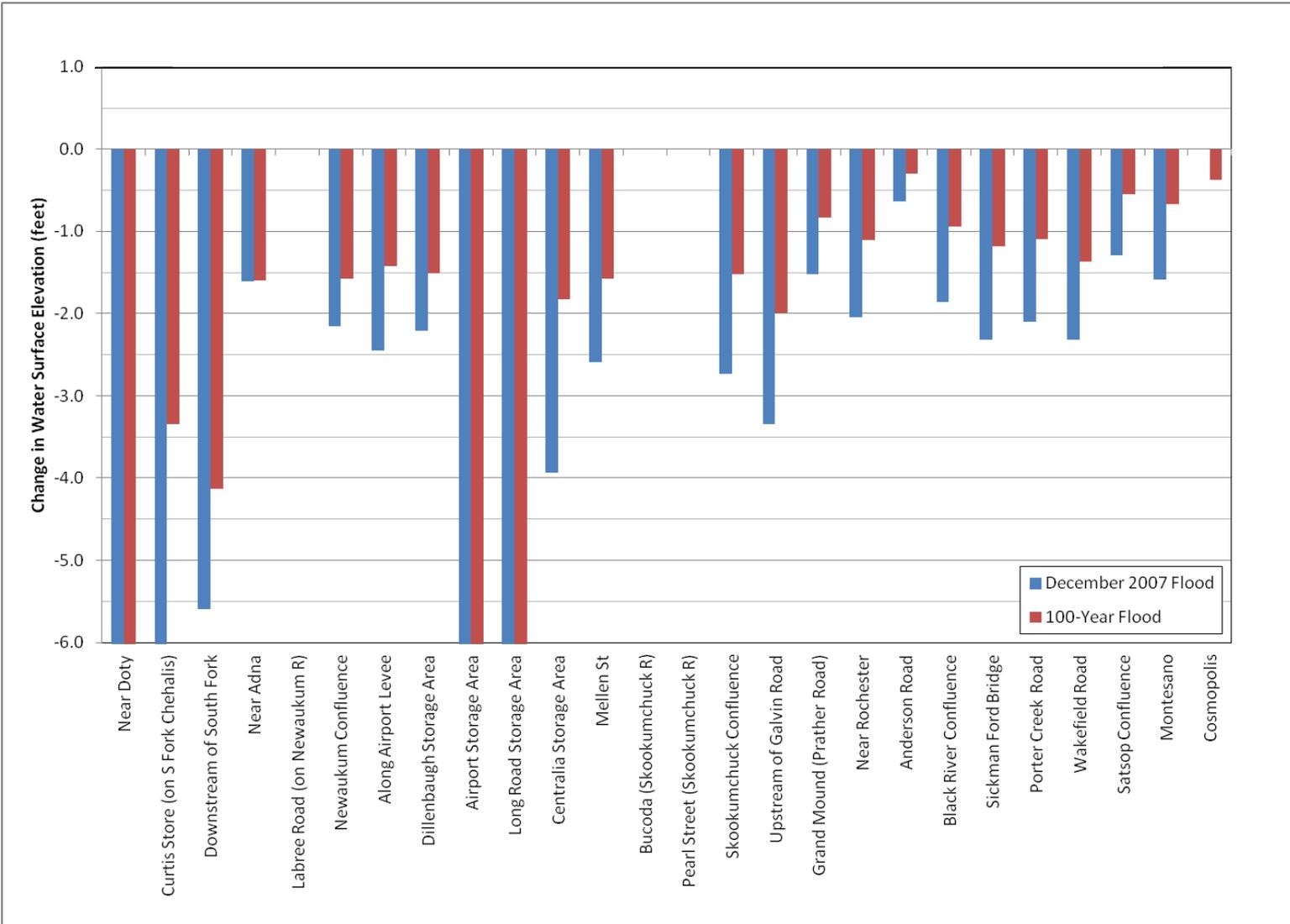
Effect of Corps of Engineers Twin Cities Project Levees Flood Relief Alternative



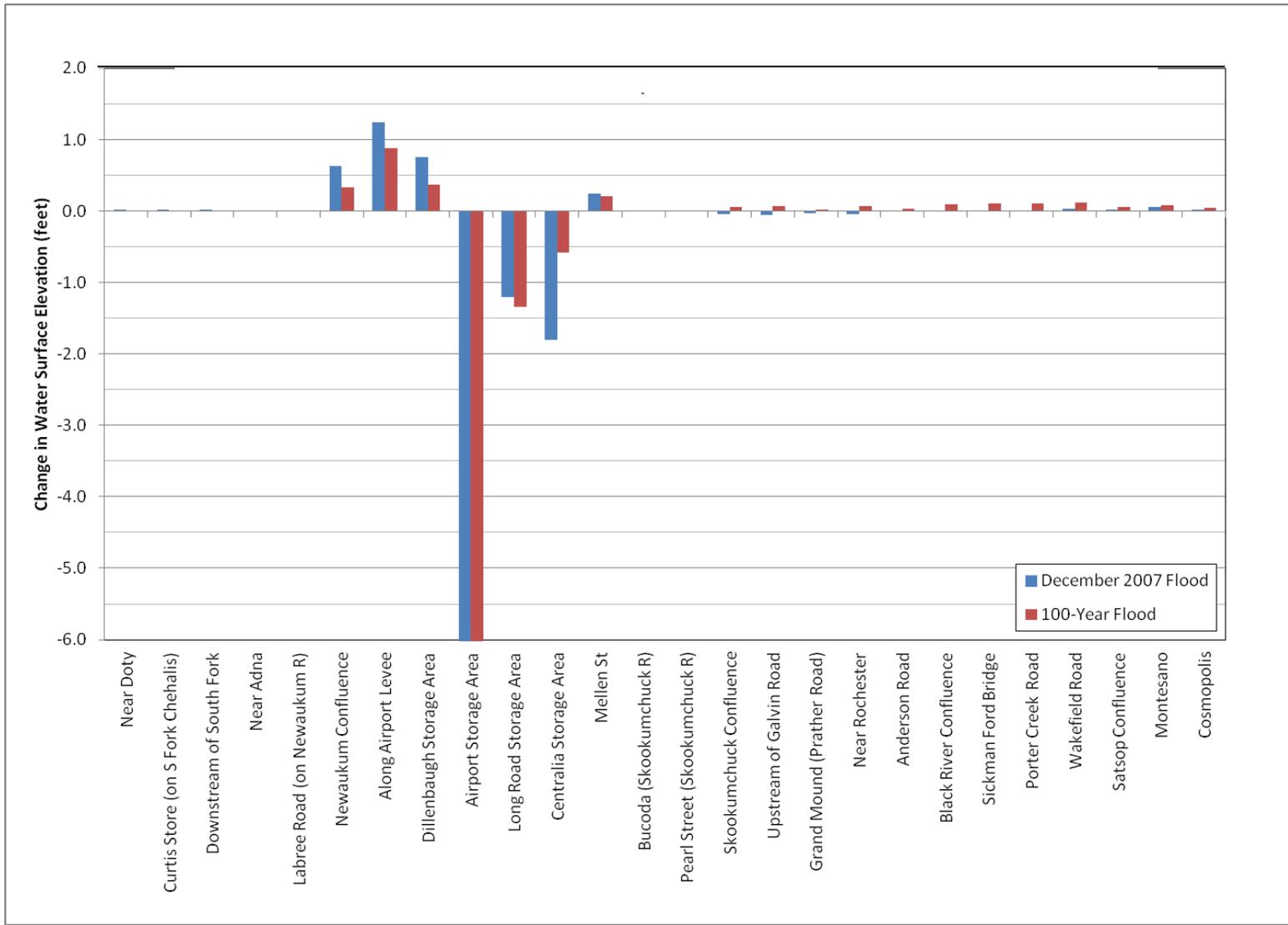
Effect of Sediment Removal (Dredging) Downstream of Mellen Street



Effect of Potential Scheuber and Mellen Bypasses and Airport Levee Flood Relief Alternative



Effect of Water Retention Facility on Upper Mainstem Chehalis River
above Pe Ell plus Airport Levee Improvements



Effect of WSDOT Floodwalls and Berms Option to Protect I-5 plus Airport Levee Improvements

Elements of a Basin-wide Strategy

- Significant reduction in flood damage and enhancement of aquatic resources
- Solving one problem doesn't increase another.
- Maintain focus in five areas:
 1. Major capital projects
 2. Localized projects
 3. Land use management
 4. Aquatic species and habitat enhancements
 5. Flood warning, emergency response



Dam Feasibility 2013-2014

- Evaluate dam designs throughout the world
- Determine the design(s) that could accomplish the flood control goals of this project and be technically feasible with site conditions
- Investigate and determine the feasibility of the dam structure from a geotechnical perspective (i.e., will the dam design be safe?)
- Identify best options for fish passage which maintain flood control integrity
- Identify the likely species and habitats that would be impacted by the flood control options being evaluated

Protecting I-5

- Four alternatives under consideration with/without dam, with/without I-5 widening:
 - I-5 Levees and Walls, Raise Airport Levee, New Southwest Chehalis Levee
 - I-5 Raise and Widen Only
 - I-5 Express Lanes
 - I-5 Temporary Bypass

Smaller Scale Actions and Programs

- Programs and Smaller Scale Actions
 - Additional flood proofing and home elevation
 - Additional home buy out programs in the floodplain
 - Additional livestock and farm evacuation areas
 - Refinements to forest practices
 - Improving riparian areas
 - Additional bank erosion control
 - Review of local land use policies: no additional risk

Scenario of Smaller Scale Flood Damage Reduction Projects

- Evaluate the benefits of smaller flood reduction projects in the Basin
 - Home elevations and buyouts
 - Small levee projects
 - Bank erosion control
 - Stormwater management
 - Removal of constrictions like road culverts

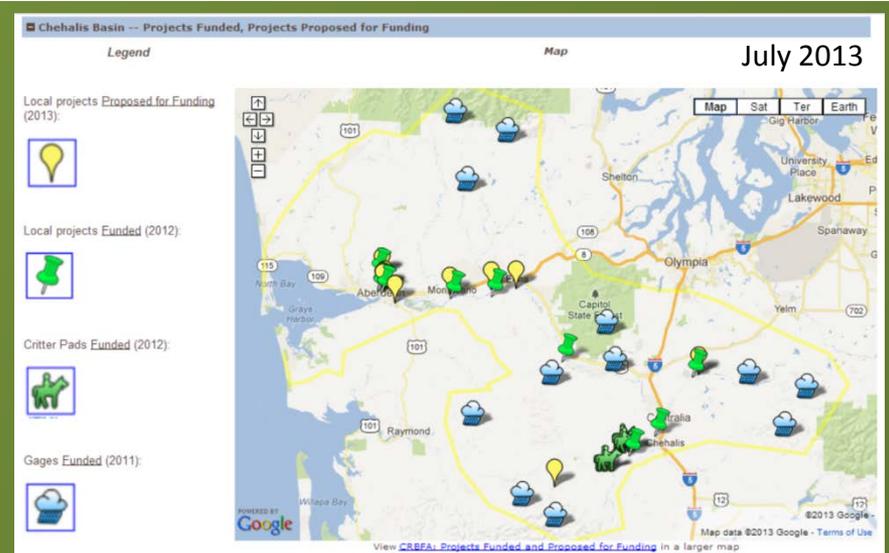
Action – Capital Projects (2012, 2013)

2012 Capital Budget

- \$5.0M – Local projects

2013 Capital Budget

- \$9.2M – Design evaluations by 2014 for Upper Basin dam (~\$5.6M) and I-5 protection (~\$3.4M)
- \$15.1M – Local projects and Fish and habitat enhancements
- \$1.8M – Local programs (buyouts, flood proofing, home elevations)
- \$2.2M – Implementation capacity, technical experts



Source:

http://www.ezview.wa.gov/pr/site/alias__1492/34489/projects.aspx

Local Project

- Revetment to Protect Montesano Road, Adjacent Facilities
 - Mary's River Lumber = 120 family wage jobs
 - Damage to State Highway
 - Montesano STP = Risk of overtopping



Decision November-December 2014

- Water Retention Permitting?
- Protection of I-5?
- Aquatic Species Enhancement?
- Small Projects and Program Changes?