

Challenges With Multi-Benefit Projects

Hamilton City Flood Damage Reduction and Ecosystem Restoration Project

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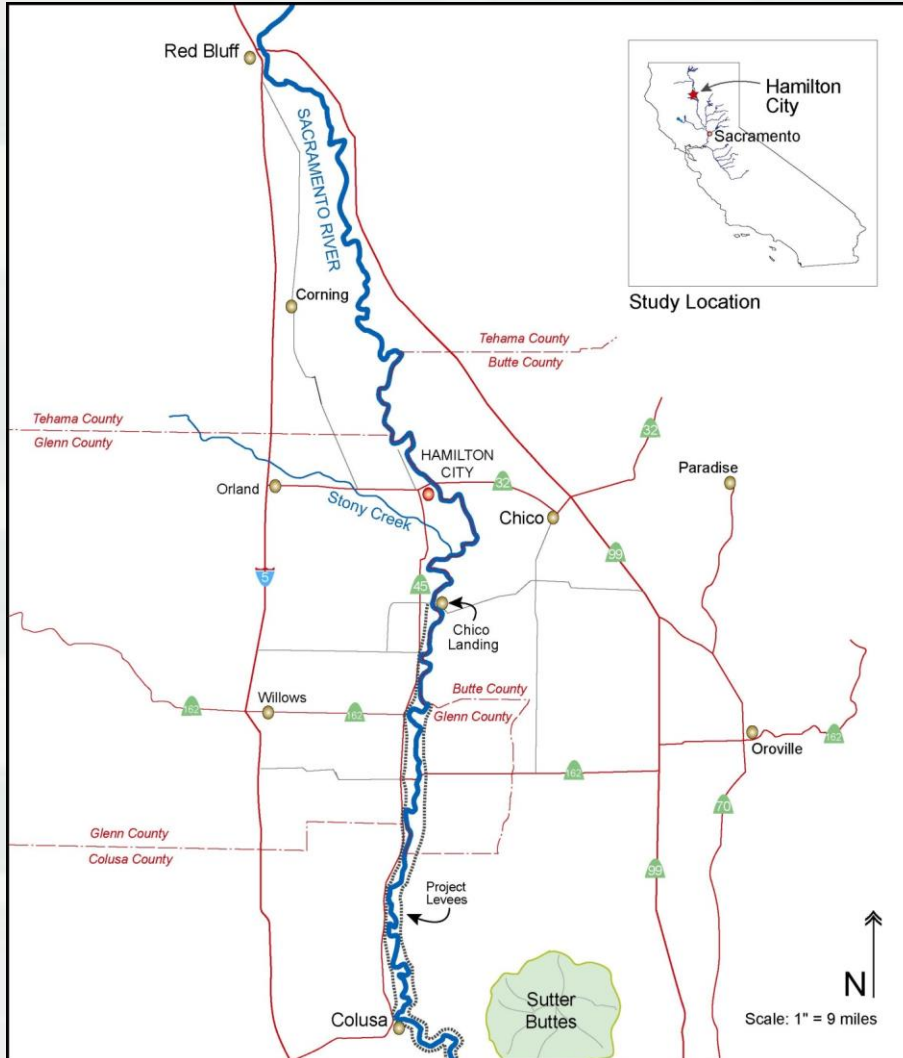
USACE, Sacramento District



Corps' Definition of a Multi-Benefit Project

- A project that is developed to address multiple water resource issues (i.e., flood risk-related issues, ecosystem degradation).
 - Includes quantification of each benefit output (monetary for flood risk reduction and *non-monetary* for ecosystem improvements).
 - Ecosystem restoration is not mitigation.
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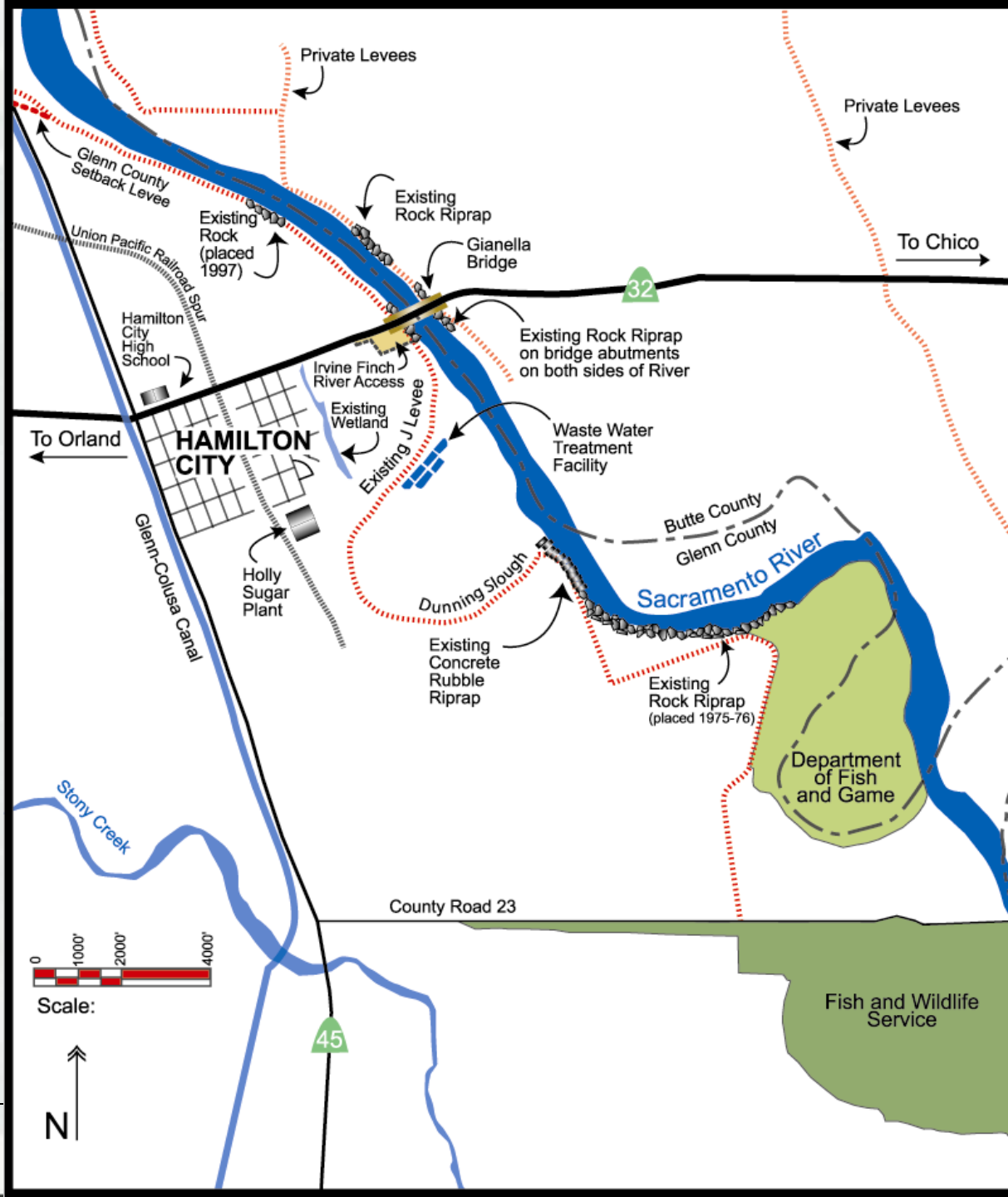
Hamilton City, CA



- In the Sacramento Valley along the west side of the Sacramento River
- 10 Miles west of Chico; 80 Miles North of Sacramento
- About 10 Miles north of the existing Federal/State levee system

Project Area

- 2,000 people
- Evacuated 6 times in 30 years
- Flood fighting 6 times in 30 years
- 3 Unsuccessful Single Purpose Flood Risk Management Studies
- CALFED, SRCAF, TNC, ecosystem of significance



Risk of Flooding and Flood Damages



Loss of Floodplain and Native Habitat



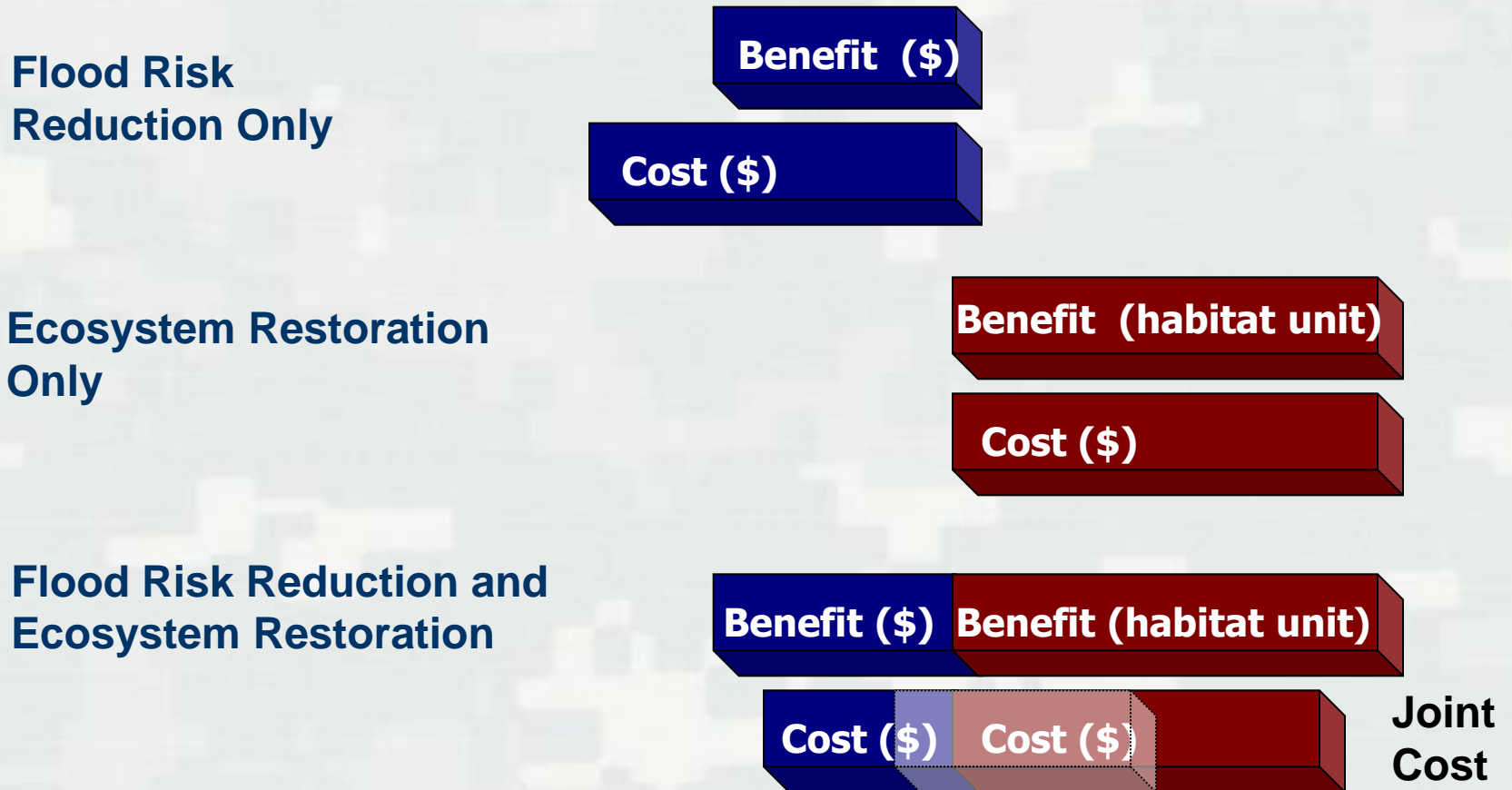
Developing a Multi-Benefit Project

- Flooding
 - ▶ Reduce Flood Risk
 - ▶ Reduce Flood Damages
 - Ecosystem
 - ▶ Improve Quantity and Quality of Habitat
 - ▶ Restore River Function
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Multi-Objective Project Features

- Flood Damage Reduction
 - ▶ Acquire Flowage Easements (non-structural)
 - ▶ Construct Setback Levee (North)
 - ▶ Construct Training Dike (South)
 - Ecosystem Restoration
 - ▶ Restore Native Vegetation
 - ▶ Reestablish Hydrologic Connection of River and Floodplain (remove existing levee)
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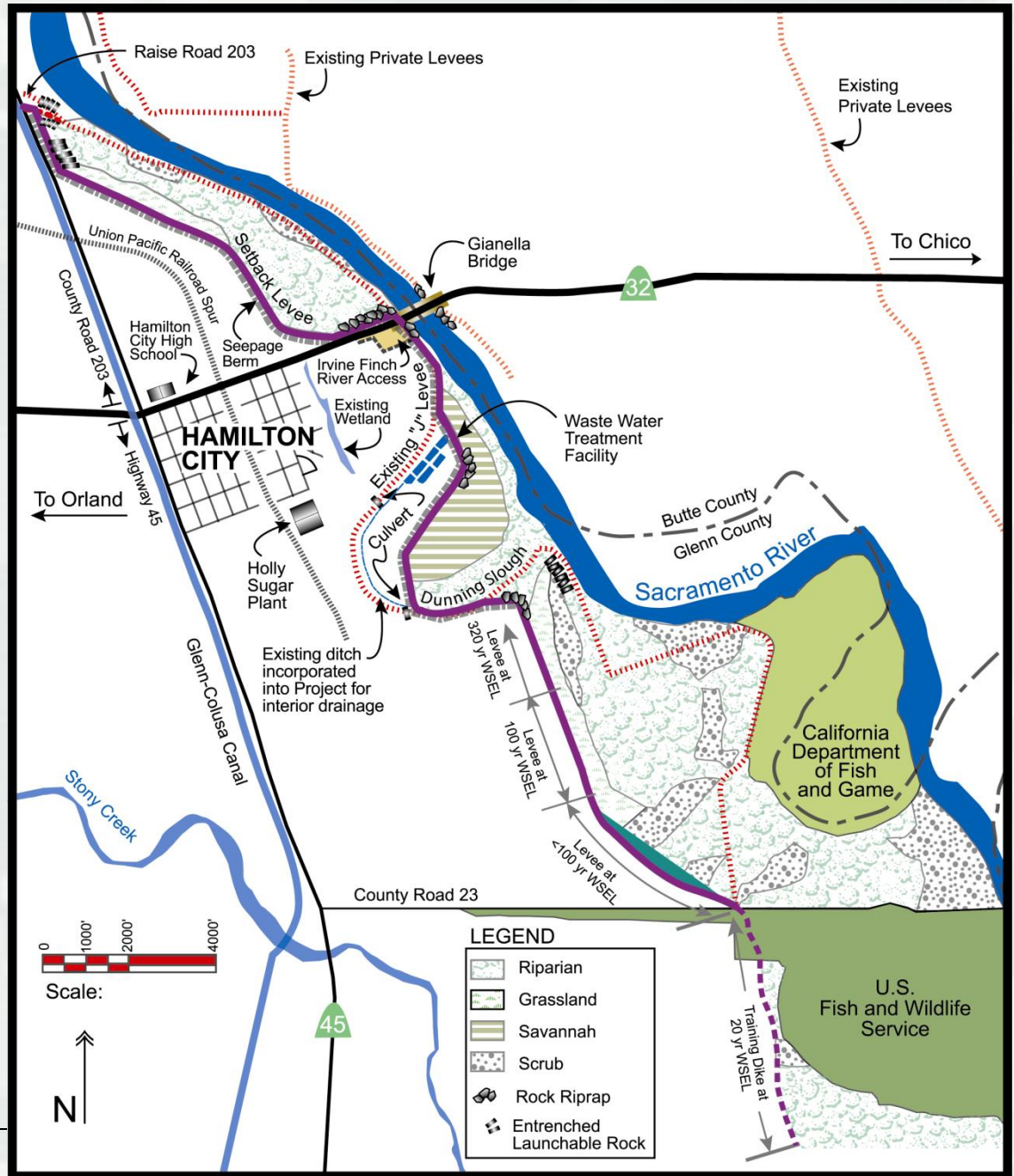
Single Benefit vs. Multi-Benefit Projects



- Cost savings over two single benefit only plans
 - Only way to provide economically justified flood risk reduction
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Congressionally Authorized Project

- Construct 6.8 miles of (mostly) setback levee and training dike
- Remove existing levee
- Flood risk reduction increase from 1 in 10 to 1 in 75 for Hamilton City in any given year
- Restore approximately 1,400 acres of native habitat



Challenge #1: Duration of Process

- Initially Part of the Comprehensive Study Initiated in 1998.
 - Feasibility Study Completed in 2004.
 - Project Authorized for Construction WRDA 2007.
 - Preconstruction Engineering and Design Completed 2011.
 - One of Only Four Construction New Starts Nationwide Funded in FY14.
 - Finalization of Plans and Specifications.
 - Initial Phase 1 Construction Contract Awarded January 2015.
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Challenge #2: Funding

- Federal Funding

- ▶ Difficult to Compete Nationally for Federal Funding

- Its hard to compare the value of multi-benefit projects with projects that have easily defined economic benefits like ports, locks, and flood damage reduction.

- ▶ Politics Plays a Role

- Different purposes have different and sometimes conflicting supporters

- Local Funding

- ▶ Must identify local supporters (payers) for flood damage reduction and ecosystem features.

- ▶ In smaller communities, this can be a significant challenge.

Challenge #3: Multi-Benefit Policy

- Corps' multi-benefit policy is relatively new and the Hamilton City project broke new ground.
 - Hamilton City was the first to successfully utilize this new policy. Several other projects have tried with less success.
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Challenge #4: New Technical Expertise Needed

- Multi-Benefit Projects Require New Technical Expertise
 - ▶ Reclamation District 2140 had no technical expertise with restoration necessary to participate in the Corps' feasibility or design process.
 - ▶ Fortunate to have The Nature Conservancy's technical expertise for design and construction support of restoration area.
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Challenge #5: Meeting Future Schedule

- Important to meet construction schedule.
 - ▶ Need show progress to maintain a constant federal funding stream.
 - ▶ Need to avoid cost increases associated with delays.
 - Acquisition of lands, easements and rights of ways.
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Questions?
