

CASE STUDY

Hamilton City Flood Damage Reduction and Ecosystem Restoration Project | Glenn County

Summary: The Hamilton City Flood Damage Reduction and Ecosystem Restoration Project involves constructing a setback levee and restoring riparian wildlife habitat to improve both flood protection for Hamilton City and environmental conditions of the Sacramento River.



The Project includes:

- 1) constructing a new 6.8 mile set-back levee;
- 2) reconnecting 1,450 acres to floodplain between the new set-back levee and the river; and
- 3) restoring approximately 1,361 acres to native riparian habitat.

The Hamilton City Project is a national model for designing a project to achieve multiple benefits, and it also demonstrates how environmental benefits can help finance the infrastructure portion of a project. Since 1906, Hamilton City and the surrounding community has relied on the J Levee for protection against flooding from the Sacramento River. The J Levee is in poor condition, and the Army Corps of Engineers (the Corps) estimates that there is only a 66% confidence that it could pass a 10-year flood event (i.e., a flood that is expected to occur once every 10 years). For perspective, the 1997 flood event was an 11-year flood event. Hamilton City, an economically disadvantaged community of about 2,000 residents, has been evacuated six times in the last 30 years due to concerns about flooding: 1983, 1986, twice in 1995, 1997 and 1998.

Although not designed explicitly as a groundwater recharge project, the Hamilton City Project is expected to benefit local groundwater supplies. Reconnecting an additional 1,450 acres of floodplain to the Sacramento River during high flow events will allow transitory storage of flood flows and help recharge the groundwater basin.

Program: In 2000, Hamilton City formed a collaborative partnership to study a combined ecosystem restoration and flood damage reduction project alternative. The collaboration included a broad range of stakeholders, including Reclamation District 2140, the Hamilton City Community Services District, Hamilton City Citizens in Action, Glenn County, local agricultural interests, the Army Corps, the Reclamation Board, the California Department of Water Resources, the California Bay-Delta Authority, and The Nature Conservancy.



The citizens of Hamilton City attempted to formulate a solution over the past 30 years through numerous Army Corps of Engineers' project feasibility studies, yet none of these studies produced a project alternative capable of meeting a positive cost-benefit ratio required by the Corps to merit federal involvement and funding, meaning for every dollar spent on the project there must be at least a dollar in benefits derived. In 2001, the Corps created a new opportunity for the town through the introduction of new planning policies (Environmental Operating Principles, EC 1105-2-404). This new policy allowed for ecosystem benefits to be quantified, in addition to the flood damage reduction benefits, and included in the financial accounting of the project. The citizens and local representatives of the surrounding agricultural community formed a partnership and included conservation interests in order to conduct a new study on a new multi-purpose project alternative. This new collaboration and resultant multi-benefit project that included ecosystem benefits finally resulted in the first project alternative that met requirements for federal participation and funding.

Adding 1,361 acres of restored riparian habitat in the Project will significantly add ecological benefit to existing riparian habitats by filling in gaps between existing remnant and restored riparian habitats along the Sacramento River. The Project adjoins 666 acres of restored habitat on the Sacramento River National Wildlife Refuge (SRNWR) and it will expand and enhance habitat for the thirty-five federally listed species on the SRNWR. The Project also adjoins 463 acres of restored habitat on the state-owned Sacramento River Wildlife Area and is directly across the river from the California Department of Parks and Recreation's Bidwell-Sacramento River State Park. Project completion will result in the largest area of connected, viable wildlife habitat (approximately 4,000 acres) along the Sacramento River. The ecosystem restoration component of the Project is based on 30 years of local habitat restoration projects implemented by The Nature Conservancy.

Status:

- Levee Construction Phase 1 was completed in Summer 2017, and 925 acres of riparian habitat were restored between 2017 and 2019.
- Levee Construction Phase 2A, which involved the northern most section of the setback levee and provides the greatest flood protection to Hamilton City, was completed in Fall 2018.
- Levee Construction Phase 2B, which included the final section of the setback levee, was constructed in Summer/Fall 2021 and completed the flood protection portion of the project.
- The final restoration of approximately 400 acres of habitat was planned to begin in 2022 or 2023. All restoration and re-vegetation work is subject to a 3-year establishment period following installation.

Additional Resources:

<http://rd2140.org/>

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