

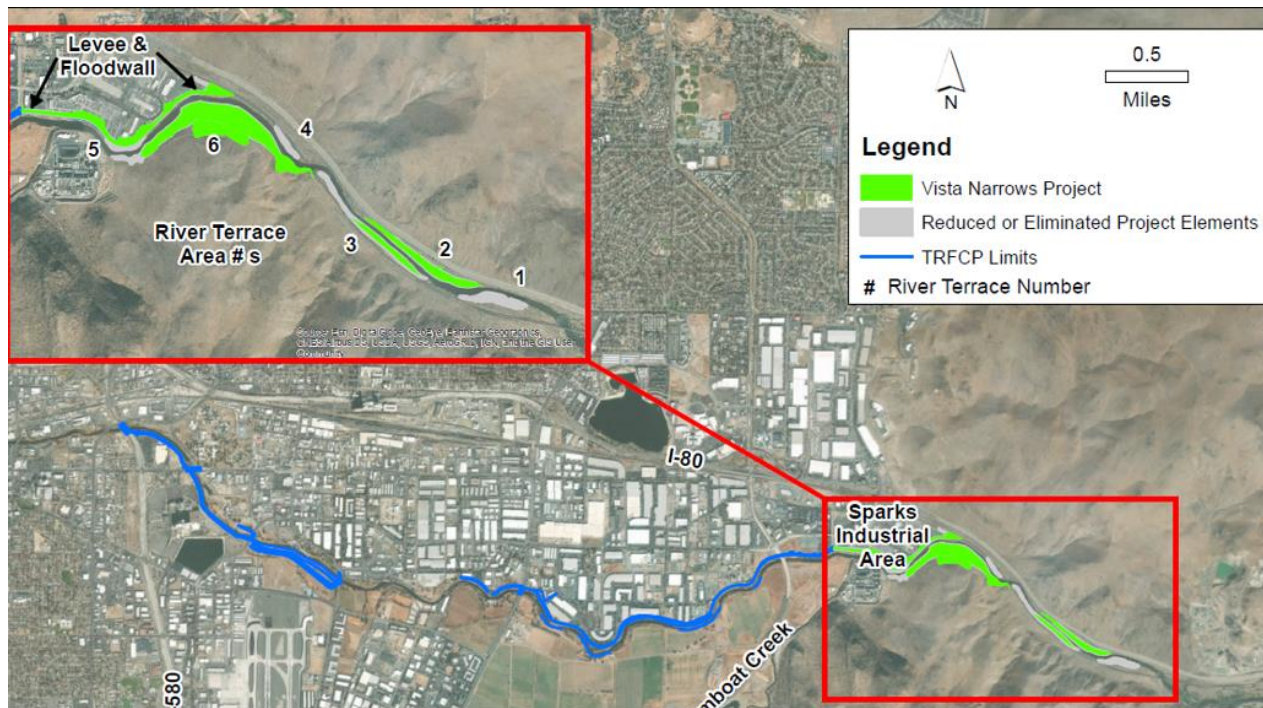


Truckee River Flood Management Authority

VISTA NARROWS TERRACING – FACT SHEET

Where is Vista Narrows?

- Vista Narrows is along the Truckee River just east of Sparks Nevada where the river leaves the Truckee Meadows and enters the canyon downstream of the Reno/Sparks area.



What is a River Terracing Project?

- A “river terracing project” involves excavating high often eroded banks along a river to create a floodplain bench just above minor flooding where the river can spread out during floods and deposit fertile soil and replenish the local groundwater along the river. The terrace, because it is low to the river, naturally grows trees such as cottonwoods and brush such as willows to create habitat for fish and wildlife.



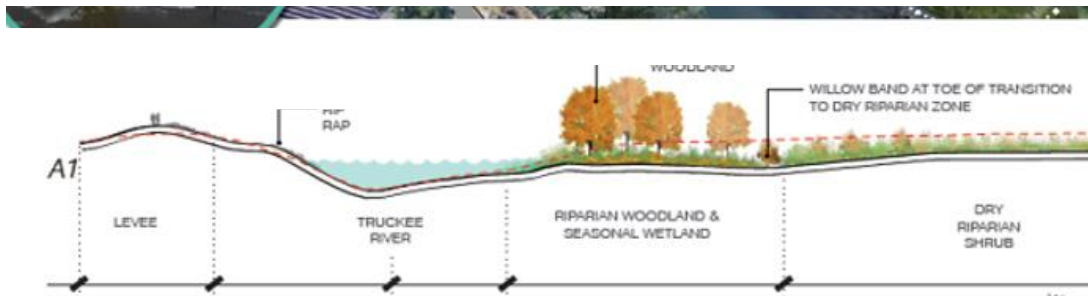
Why does the Truckee River need a Terracing Project at Vista Narrows?

- Years ago, the Federal Government Blasted the bottom of the Truckee Riverbed at Vista Narrows and the river began to erode and down cut creating high barren banks along both sides of the river. These banks often have no vegetation and are eroding and the banks and high terrace above the banks provide poor fish and wildlife habitat. They are also eroding fine sediment into the river.
- In addition, the river is constrained at this point and during floods the water backs up and forms a lake upstream that inundates industrial areas in Reno and Sparks as well as the Reno Tahoe Airport and residential areas in south Reno. Flooding in these areas can cause billions of dollars in property and economic damage during a 100-year flood event. By widening the river with a terrace, the river will not back up so badly and will help eliminate flooding in the industrial areas, thereby reducing property damage and the release of chemical pollution into the river.



What does the Vista Narrows Terracing Project consist of?

- The Vista Narrows Terracing project as currently proposed consists of Floodplain Terracing at 3 locations just East of Sparks Nevada on the Truckee River (areas in green on the first figure)
- These terraces are on both sides of the river and are a total of 8,600 feet long. The terracing occurs just above the ordinary high-water mark so that the river itself is only marginally impacted along the banks. Approximately 450,000 cubic yards of materials are to be removed to create the terraces. Note: the redline below denotes the old bank height.



- These terraces will be re-vegetated with appropriate native species that thrive in river floodplains. This new vegetated area will provide habitat for fish and wildlife as well as 13 acres of new wetlands for habitat.
- Vista Narrows is the key project in a series of River terracing, levee, and floodwall projects that are planned along the Truckee River from the I-395 Bridge downstream to Vista Narrows. It builds on previous projects such as the Reno-Sparks Indian Colony Levee and flood wall upstream of the Glendale Bridge, North Truckee Drain, and numerous downstream restoration projects done in cooperation with the Nature Conservancy and other partners between Lockwood and Derby Dam.

Are there any downsides or impacts?

- While the Vista Narrows provides tremendous benefits such as flood control and improved riverine habitat in and around the terraces, the opening up of the river allows water to move through faster so the upstream areas do not form a lake. Because of this there are higher peak flows going downstream especially for bigger, rarer flood events. In fact, the peak flow for the 100-year event downstream of Vista has a 3.5% higher peak flow with Vista Narrows terracing than otherwise. If the entire associated Truckee Meadows Flood Project of levee, floodwalls and additional terracing is done upstream, that would increase that peak flow 11% because of flood water storage losses in the industrial areas and airport.
- The Truckee River Flood Management Authority undertook studies on how increased flood flows effect homes/structures near the river, sediment and erosion in the river, and bank erosion. Studies showed that the peak flow increase did not change sediment and erosion and bank erosion much because it is short lived (about a 15 hour impact every 100 years). Regarding other impacts, TRFMA has engaged with downstream stakeholders to ensure proper and fair mitigation of these impacts. The goal is to leave the entire River in better shape than before the project from Vista Narrows all the way downstream to Wadsworth and beyond.
- The downstream impacts studies found that on average the increase in depth of water during a 100-year flood was about 0.6 feet or about 7 inches. The increase in velocity was about 0.3 feet per second. For comparison, the river will be approximately 10-15 feet deep and be running at 8-10 feet per second during a 100-year flood. Impacts to banks and beds in terms of erosion or sedimentation were largely minor: under 2-3% or less.

Are there benefits to this project?

- Yes! The Vista Narrows project alone lowers water levels in the Truckee Meadows pool during large floods from 0.2 feet to over 2 feet in places. After full project buildout of the entire Truckee Meadows Flood Project, of which Vista Narrows is the key part, large portions of the Reno and Sparks industrial areas, the Reno Tahoe International Airport, and other infrastructure such as Grand Sierra Casino and Resort will not flood during 100-year floods, preventing hundreds of millions of dollars in economic damage.
- In addition, the habitat for both fish and wildlife will be improved along the river where the terraces will be constructed.

What is the status of this project?

- A substantial design for this project was completed in late November of 2019.
- The project is currently in the permitting phase. Once key permits are obtained, the final design will be developed, and TRFMA will hire a contractor(s) for construction.
- TRFMA's goal is to begin construction sometime during 2023 or 2024
- The project should take 1-2 years to build followed by several years for full revegetation establishment.

Costs?

- All costs are to be paid from the 1/8 cent sales tax that goes to Flood Authority to manage flooding and build flood infrastructure to protect homes and businesses along the river.
- The cost for the terracing is approximately 40 million dollars.
- Costs for downstream mitigation have not been fully worked out yet.