

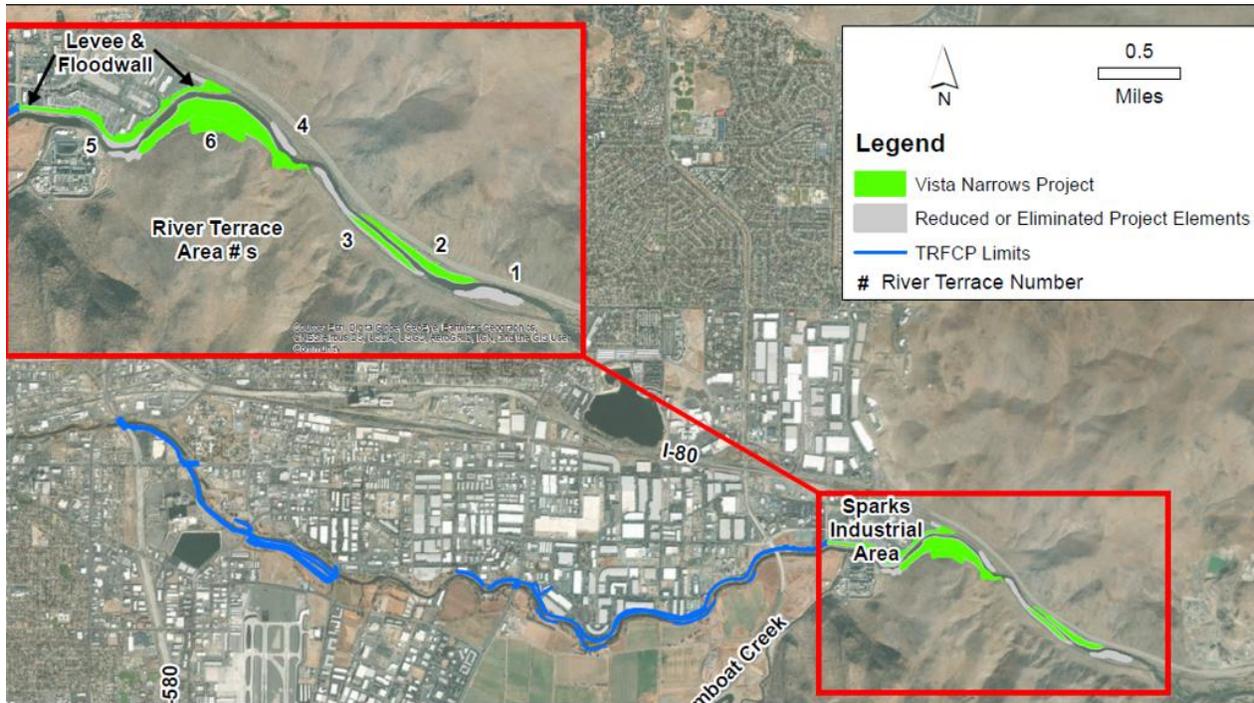


# Truckee River Flood Management Authority

## 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” is where you excavate 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 also 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 River bed 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. By widening the River with a terrace it will allow the River to not back up so bad to facilitate isolating the industrial areas so they do not get flooded and then release flood water laden chemicals back into the River. The flooding can literally cause billions of dollars in property and economic damage during a 100 year flood.



### 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, see areas in green in river terrace areas in figure above.
- 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. Because of the height of the banks this means approximately 450,000 cubic yards of materials are to be removed. Note: the redline below denotes the old bank height.



- Within these terraces there will be a net gain of approximately 13 acres of wetlands that will be re-vegetated with native species such as cottonwoods and willows in order to improve fish and wildlife habitat. There is also a net gain of Riparian habitat for fish and wildlife.
- 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 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 between Lockwood and Derby Dam over the last 15 years.

### 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 thru 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 event that would occur only once every 100 years has a 3.5% higher peak flow with Vista Narrows terracing. If the entire associated project of levee, floodwalls and additional terracing is done upstream, that would increase that peak flow 11%.
- Because of these peak flow changes the Truckee River Flood Management Authority undertook studies for how these increased flood flows effect homes near the River, sediment and erosion in the River as well as bank erosion. While 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). We have engaged with downstream stakeholders regarding changes in high water levels and other impacts to ensure proper and fair mitigation of these impacts occurs. 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. Please note that the River will be 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 project of which Vista Narrows is the key part, large portions of the Reno and Sparks industrial areas, the Reno Airport, and other infrastructure such as Grand Sierra Casino and Resort will stay dry during 100 year floods leading to hundreds of millions of dollars in prevented economic damage.
- In addition, the habitat for both fish and wildlife will be improved along the river where the terracing will occur.

### 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 permitting. Once key permits are obtained the final design will be developed and the project will be let out for construction.
- The goal is to begin construction sometime during 2022 or 2023
- The project should take approximately 1-2 years to complete.

### 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 35 million dollars.
- Costs for downstream mitigation have not been fully worked out yet.