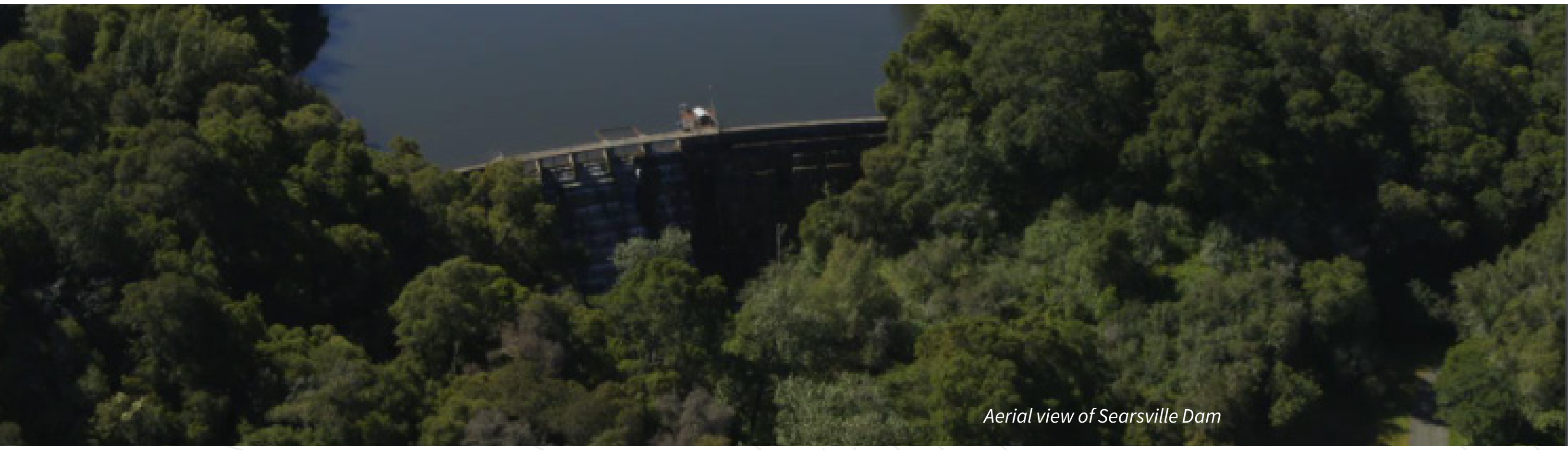


*Aerial view of Searsville Dam*

Stanford University is proposing to implement the Searsville Watershed Restoration Project to restore and enhance this watershed.

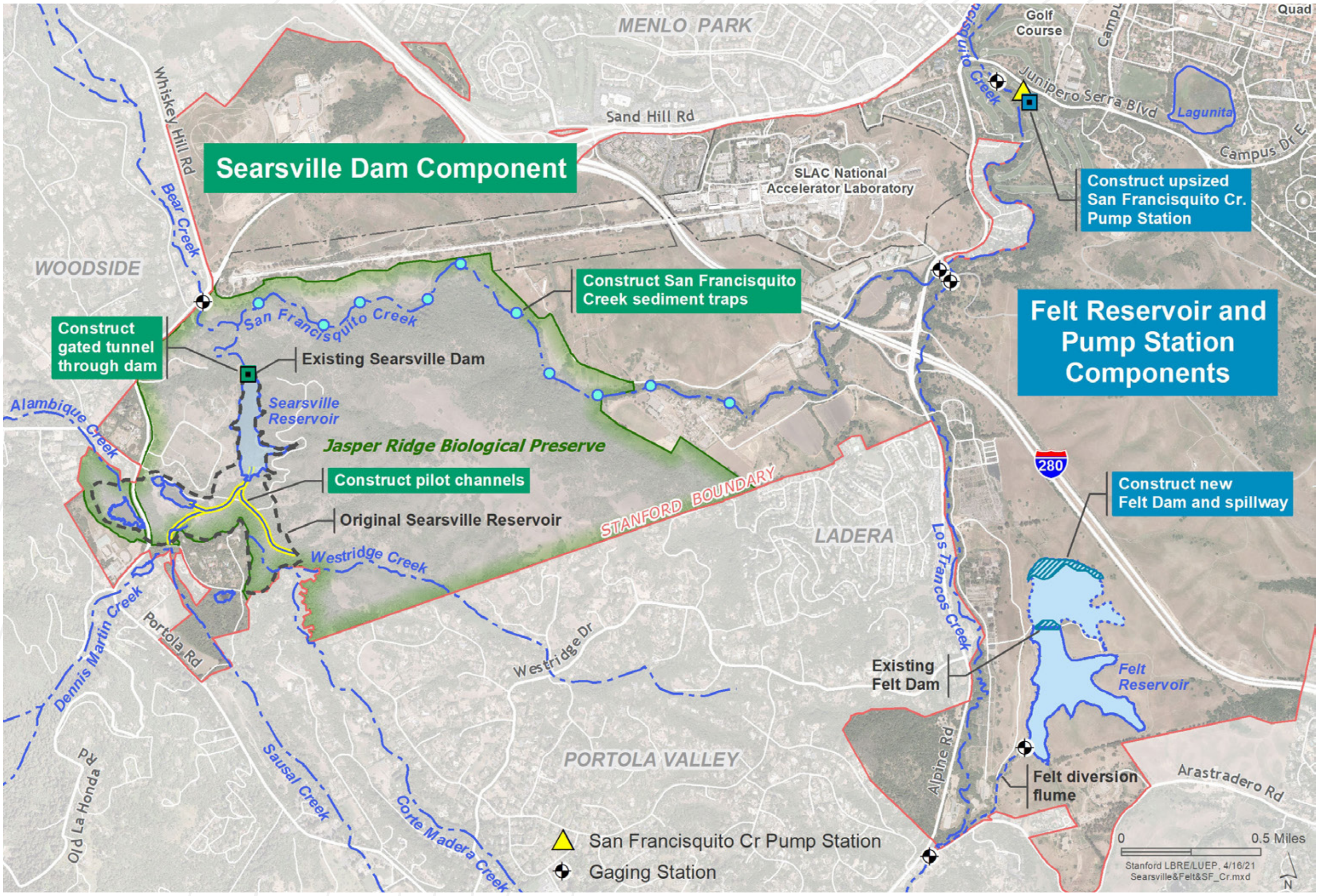
The Searsville Watershed Restoration Project involves: reestablishing natural free-flowing creeks and sediment transport processes; fish passage through a tunnel to be constructed through the base of the dam; restoring streams and riparian habitats immediately upstream of the dam; flushing a substantial amount of sediment currently trapped behind the dam; and replacing the surface water diversion and storage capacity through modifications to the downstream San Francisquito Creek Pump Station and Felt Reservoir. This will transform the area of the current Searsville reservoir into a confluence valley, complete with free-flowing streams and a natural riparian forest. This project will also allow for sediment to be transported to the bay where it will help restore natural functions and fortify the shoreline.

## Why this project is needed

The Searsville Dam was constructed in 1892 by Spring Valley Water Company. Stanford University purchased the dam and associated water rights in 1919 to ensure adequate water supply for the university campus. For nearly 130 years, sediment has been piling behind the dam and filling the reservoir, impacting the water supply and storage function of the reservoir. Currently the reservoir's water storage capacity has been reduced by nearly 90 percent.

In 2011, Stanford formed a faculty and staff Steering Committee to help evaluate options and ultimately recommend a course of action for the Searsville Dam and reservoir. To ensure that the study process had the benefit of a broad range of community perspectives and expertise, Stanford invited a group of public agency representatives, non-government organizations and community members to be part of a Searsville Advisory Group. The Advisory Group provided input and recommendations for consideration to the Steering Committee and University leadership.

*Rendering of the future dam gate*




Together, the groups agreed any future project must address the following objectives: restore natural sediment processes and creek flows as well as restore fish passage while avoiding increases in flood risk compared to existing conditions, minimizing disruptions to ongoing teaching and research at the Jasper Ridge Biological Preserve, and protecting important cultural resources.

## What does the project include?

Stanford, in collaboration with federal and state resource agencies, has developed an approach that restores the natural sediment process past the dam and restores fish passage past the dam giving fish access to the upper watershed.

The approach involves constructing a tunnel and gate at the base of the dam, allowing for the flushing of much of the accumulated sediment downstream to San Francisquito Creek and to San Francisco Bay. The tunnel opening will be sized to pass normal flows but constrict high storm flows, attenuating the peak flow rate downstream. Areas above the Searsville Dam will be restored and managed to create a highly functioning confluence valley with riparian areas, meandering creeks, floodplain terraces and wetland areas supporting a variety of habitats and vegetation. The key project components include:

- A new tunnel and gate in the existing dam structure
- Downstream sediment traps
- Pilot channels for re-establishing creeks
- New access roads and improved existing roadways
- Natural bank stabilization and re-vegetation
- San Francisquito Creek Pump Station modifications to increase its diversion flow capacity
- Felt Dam and Reservoir modifications to increase storage capacity

**We welcome your feedback and questions.**
**Please contact us at: searsville@stanford.edu**