



Azalea Hill Restoration Project Update

December 10, 2020



Outline

- Environmental Compliance
- Phase II Trail Work
- Bullfrog Bridge Installation
- Work Plan for Calendar Year 2021/2022



Restoration Project

Ongoing trail construction work is designed to ensure more sustainable ecology while enhancing visitor access.



Saving Serpentine Habitat

The greenish serpentine soil covering Azalea Hill is home to tough and tiny plants that grow few other places.

Heavy human traffic on and off the trails here has threatened the plants that grow in the serpentine outcrops.

MMWD is enhancing this trail as part of a multi-phase project to preserve wildlife and the watershed, and to encourage responsible use of this location.



How You Can Help



Stay on designated trails

A new trail alignment was designed to protect this fragile ecosystem and protect water quality, but depends on visitors respecting the marked paths and staying on trail.

Thank you for your continued cooperation



Stay off restricted trails

The unmarked "social trails" on this location have been removed to protect the habitat.



Stay out of closed areas

Please help us make this project a success by observing marked trails.



Phased Construction

MMWD has secured funding from the Mt. Tamalpais Fund, the Emig Trust and Proposition 68 to begin construction of the trail. MMWD is actively seeking grants and private donations to support construction of future phases.

To make a donation to this project, visit MarinWater.org/MtTamWatershedFund

MarinWater.org
and OneTam.org



Environmental Compliance

- Staff and contractor environmental compliance trainings
- Nesting landbird surveys
- Bat roosting habitat surveys
- Western pond turtle surveys & avoidance fencing
- Tree replacement mitigation:
Willow cuttings, black oak, valley oak, Oregon white oak and CA buckeye
- Rare plant surveys & avoidance measures:
 - Arctostaphylos montana* ssp. *Montana*
 - Calamagrostis ophitidis*
 - Cordylanthus pilosus* ssp. *pilosus*
 - Eriogonum, luteolum* var. *caninum*
 - Lessingia micradenia* var. *micradenia*
 - Mt. Tamalpais manzanita
 - Serpentine reed grass
 - Hairy bird's beak
 - Tiburon buckwheat
 - Tamalpais lessingia

Phase II Trail Work

- CCNB Prop 68 grant \$225,000 funding brushing, tread construction and Phase II crossings



Future route to avoid Hairy bird's beak
(*Cordylanthus pilosus ssp. pilosus*)



Trail closures signs for social trails

Bridge Installation

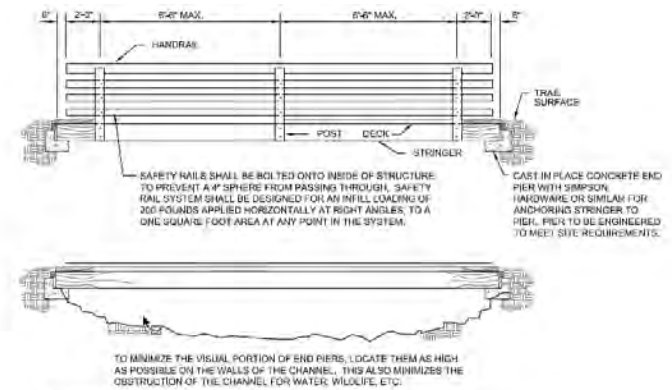
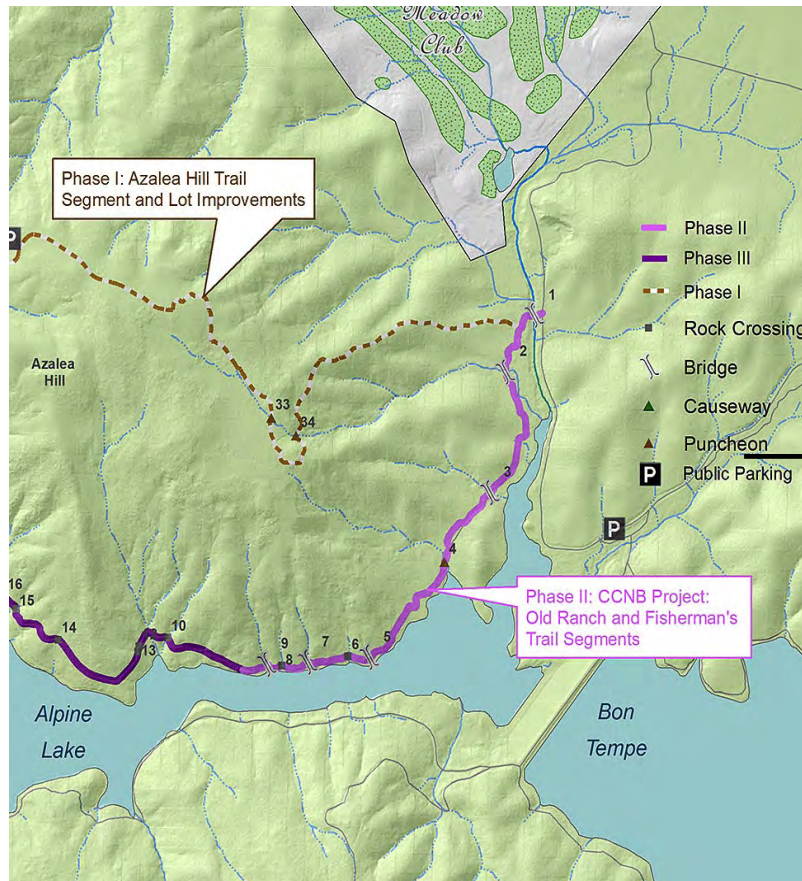
- EMIG Trust (\$75K) & Mt. Tamalpais Watershed Fund (\$75K)



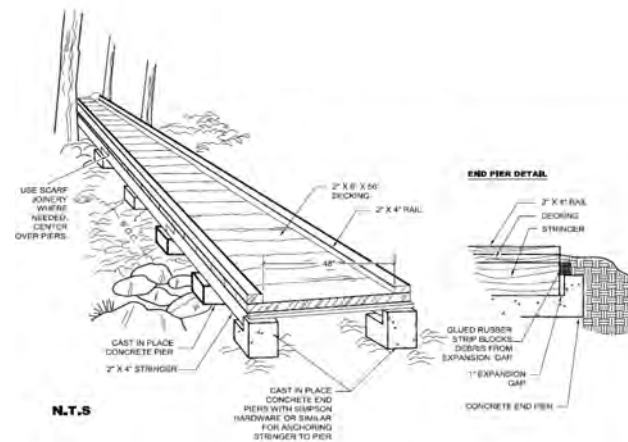


Azalea Hill Work Plan for 2021

- CCNB Grant \$225,000 for Phase II trail crossings and tread work



ELEVATIONS



Azalea Hill Work Plan for 2021-2023



- NEPA compliance planning for CA RTP \$700K grant to support 2022-2023 Phase III trail work
- Rare plant survey work throughout Phase III
- Evaluation of mitigation approach
- Retaining wall design work
- Geotechnical analysis
- Vegetation management along trail corridor
- Signage and social trail closures

Azalea Hill

Ongoing Improvements

Ongoing trail construction work is designed to enhance visitor access while ensuring more sustainable ecology.

Phase I
Azalea Hill Trail Segment and Lot Improvements
NOW OPEN
WORK ONGOING

Phase II
Old Ranch and Fisherman's Trail Segments
OPENING 2021-2022
OUT & BACK

Phase III
Liberty Gulch Segment
OPENING 2022-2025
CLOSED WHILE UNDER CONSTRUCTION

Restoration Area
PLEASE STAY ON DESIGNATED TRAILS

• Crossing
• Public Parking

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Stay out of closed areas
Please help us make this project a success by observing marked trails.

For more information visit

MarinWater.org
and **OneTam.org**

Qty: 1, two-sided
36" w x 48" h

Azalea Hill

Restoration Project

Ongoing trail construction work is designed to enhance visitor access while ensuring more sustainable ecology.

About the Project

Marin Water is upgrading hiking and equestrian routes over Azalea Hill while establishing a multi-use path along Alpine Lake.

The multi-phase project includes decommissioning of social trails that cut through sensitive serpentine habitat and the installation of bridges and other trail improvements to curb trail erosion and protect sensitive natural resources.

Phased Construction

The timing of this three-phase project is dependent on funding support. MMWD is actively seeking support to build upon funding from California Conservation Corps North Bay through California Prop 68, the EMIG Trust, State Parks funding through the Federal Highway Administration (FHWA) Recreational Trails Program (RTP), and donations from One Tam members.

To make a contribution to this project, please visit MarinWater.org/MtTamWatershedFund

Phase I

The initial focus of construction will be a new hiking and equestrian route over Azalea Hill. This effort will restore natural conditions in this sensitive habitat and improve water quality on Alpine Lake, a primary drinking water source for Marin County. In the process, approximately 4.4 miles of social trails will be decommissioned.

Phase II

Trail improvements along the .75 mile known as the "Old Ranch" and "Fisherman's Trail" will include installation of six trail bridges and other crossings to allow water to flow to Alpine Lake.

Phase III

This final 1.2 mile phase will complete the connection from Fisherman's Trail to Bolinas-Fairfax Road via Liberty Gulch. This section will feature a large retaining wall and requires construction of one bridge and several additional crossings. This will allow visitors access to the watershed without traversing the busy roadway or fragile serpentine hillside.

Saving Serpentine Habitat

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Summary

Grants

- EMIG Trust and Watershed Fund \$150,000-Bridge over Bon Tempe Creek
- CCNB Prop 68 Grant \$225,000-Phase II
- Recreational Trails Program-Federal Highway Administration/CA Department of Parks and Recreation Grant \$700,000-Phase III

Project Elements Underway & Completed

- Installed Bridge over Bon Tempe Creek
- Initiated Trail Grade Work in Phase II with Crossings Planned for CY 2021
- Continuing Social Trail Closures & Signage
- Continuing Trail Improvements on Phase I
- Initiating Design and Environmental Work for Phase III