



FINAL APPROVED 2019 WORK PLAN FOR ONE TAM INITIATIVE

The following programs and projects are under consideration by the One Tam in 2019 to improve the health of the mountain, enrich the experiences of its visitors, and cultivate and educate a new generation of stewards. They build from, and sustain successful 2018 work, and will be implemented as funding becomes available. Projects reflect partner agency priorities, and will include all necessary agency permitting, compliance, and community engagement and public review. Each work plan activity adds capacity to existing partner programs and collectively increases the mountain-wide reach and impact. For more information, including the proposed *2019 One Tam Approach to Community Engagement*, please visit: www.onetam.org.

Community & Conservation Programs

One Tam Five Year Strategy Development (2019-2023) to guide One Tam's goals and outcomes for the next five years.

- Continue outreach and community engagement to gain feedback
- Publish 5-Year Strategy
- Implement Year One goals.

Complete Longitudinal One Tam Partnership Research to include publishing a report: *Generating, Scaling Up, and Sustaining Partnership Impact: One Tam's First Four Years*.

- Publish the final report on the findings from long-term study
- Prepare guide on how to integrate the *Partnership Impact Model* into partnership evaluation
- Deliver presentations on the findings of the final report
- Prepare academic and practitioner articles for local and national publications

Conservation Management Team staff strategically advance weed control, habitat restoration, ecological monitoring and sustainable practices at a mountain-wide scale.

- *Programmatic Vegetation Inventory, Monitoring and Management*
 - Evaluate and analyze 2018 invasive weed early detection, grassland and rare plant monitoring results, assess and adapt protocols, and continue mountain-wide programs
 - Survey approximately 100 miles of roads, trails, and riparian corridors for the early detection of invasive weeds; treat all new priority detections
 - Provide contractor oversight support for high priority invasive species projects
 - Integrate and coordinate work with the joint NPS (National Park Service)-State Parks vegetation management program throughout the Redwood Creek Watershed
 - Improve data sharing, storage and analysis with further software development with the Weed Manager platform within the Calflora Database; provide technical support to other State Parks and collaboratives across the state

- Continue implementation of best management practices for controlling the spread of pathogens and invasive weed species
 - Coordinate and lead collaborative trainings with agency partners in the areas of early detection, rapid response, communications, field ergonomics, and rare plant monitoring
 - Hire and train (2) One Tam Conservation Management Team Seasonal staff to perform field work mountain wide
- *Large Scale Inventories and Monitoring Activities*
 - Marin Wildlife Picture Index Project (WPIP)
 - Disseminate of results from Phase One (establishment of 3-year baseline) of the WPIP
 - Sustain camera operation in the Lagunitas Creek and Redwood Creek Watersheds and streamline data upload processes
 - Support beta-testing and implementation of cloud-based Wildlife Insights 2.0 platform for wildlife image cataloguing, and utilize an innovative data explorer tool for sharing real-time analyses.
 - Vegetation Map and Landscape Database Development: Continue to participate in review of classification scheme, sampling site selection, and field data collection associated with County-wide map development.
 - Bat Inventory and Monitoring:
 - Evaluate results from first two years of inventory and determine work plan for 2019 and beyond.
 - Continue to support and implement acoustic monitoring program.
 - Complete Best Management Protocols for vegetation treatment and forestry work
 - Seeps and Springs
 - Product final report; and integrate dataset into a One Tam database
 - Assess feasibility and capacity to expand inventory work to southern Redwood Creek Watershed
 - Develop approach to spring-specific culture resource assessments in anticipation of revitalization projects being in 2020.
 - Pollinators (Bees)
 - Produce final report
- *Rare Species Enhancements*
 - Support the monitoring of re-introduced Western pond turtles in the Redwood Creek Watershed
 - Support communication and outreach with Coho Jumpstart program.
 - Support re-establishment effort for Mt. Tamalpais thistle *Cirsium hydrophyllum* on Marin Municipal Water District (MMWD) and State Park lands
 - Support increased public awareness of foothill yellow-legged frogs on Marin County Parks (MCP) lands
- *Begin updating Measuring the Health of a Mountain components in anticipation of 2021-22 second edition*
 - Migrate all of the current Peak Health content to new OneTam Website
 - Develop metrics for condition, trends and the health of bats, seeps and springs and bees
 - Develop a framework for updating Peak Health indicator datasets on an annual basis
 - Develop a framework for strengthening climate-related content in next *Measuring the Health of a Mountain*

- Standardize and streamline field protocols and training manuals across interagency work groups
- *Hire and Train One Full Time Biological Monitoring Assistant* to support wildlife monitoring efforts including but not limited to the servicing of Wildlife Picture Index cameras, bat monitoring (acoustic, mist netting, and telemetry), Northern Spotted Owls, Western pond turtles, and California red-legged frogs.

Community Engagement programs provide outreach, interpretive and naturalist programs for interested community members.

- Deliver 40 education, naturalist, community building events, and field trips to raise awareness and build stewardship in collaboration with Volunteer Stewardship, Youth, and Community Science Programs.
- Strengthen One Tam Roving Ranger program to include content linked to projects, conservation management programs, and community science initiatives including but not limited to: the Bothin Marsh project and climate change; WPIP, bats, fungi, and water supply.
- Deploy the One Tam Roving Ranger at 40 events and activities in support of One Tam partners
- Support continued development of the State Parks docent program
- Provide 45 presentations and outreach at local community events, meetings and trailheads.
- Improve multi-agency volunteer tracking and event coordination through web portal on www.onetam.org and the Hands-on-Connect database to streamline volunteer registration, statistics analysis and reporting
- Support One Tam Backpack Program in partnership with Marin County libraries and Community Centers to facilitate equitable access

Community (Citizen) Science programs authentically engage volunteers and youth in science-based research inventory and monitoring projects.

- Continue to support the Marin Wildlife Picture Index Project
 - Recruit and train 85 volunteers and 120 students, and sustain five community and academic partnerships to support MWPIP cataloging
 - Lead 24 WPIP science program events to train and support volunteers cataloging wildlife photos
 - Develop a training, dataflow and quality control protocol to facilitate volunteers cataloging remotely using the interactive Wildlife Insights 2.0 once available
- Conduct at least 4 Bioblitzes on MMWD, MCP, NPS and/ or State Parks lands including two focused on fungi, one focused on spring habitats, and one in support of the California Academy of Sciences City Nature Challenge
- Assess existing agency community science, and inventory and monitoring programs to determine which could be supported by the One Tam Community Science Program, specifically western pond turtles, coho jumpstart program, foothill yellow legged frogs
- Support the development and expansion of staff and volunteer training modules that increase knowledge of natural resources
- Support development of health metrics, and condition and trend assessments for previously undescribed or under-described focal resources including seeps and springs, bees, bats, serpentine barrens, grassland birds and rare plants;
- Evaluate two monitoring protocols for the potential for community science programing: the National Protocol Framework for the Inventory and Monitoring of Bees and the Spring Stewardship Institute Protocol
- Support volunteer participation in field work related to the development of the Marin County Vegetation map.

- Hire, onboard, and train new Community Science Program Assistant support Marin Wildlife Picture Index Program, bat monitoring, bioblitzes, and the development of new initiatives.

Volunteer Stewardship and Youth programs provide educational, service-based, and career development opportunities for local youth; and engage volunteers of all ages in service-based habitat restoration, monitoring and trails projects.

- Assess existing program offerings and current audiences to determine gaps/needs, and capacity within partner agencies to support and lead existing and new programs.
- Lead, administer and evaluate 3 high-visibility mountain-wide multi-agency volunteer days: Hands on Tam, Day of Thanks, and Earth day
- Increase One Tam volunteer stewardship workdays overall from 80 per year to 92 by adding a once-a-month trails maintenance event to the existing bi-weekly restoration series.
 - Maintain priority volunteer stewardship events under the guidance of NPS and State Parks
 - Maintain event series conducted jointly with MCP near Creekside Park
 - Expand activities into Samuel P Taylor State Park, supporting Zen of Weeding Group
 - Pilot trails stewardship and maintenance program
- Lead One Tam LINC (*Linking Individuals with Natural Communities*) program and provide advanced summer internships for 2015-18 LINC youth participants,
- Coordinate and support youth and school participation in the Trout in the Classroom program
- Strengthen partnerships with 11 community organizations to engage youth in stewardship programs
- Collaborate with One Tam scientists, field staff, and One Tam Youth and Education Program Manager to design educational materials for One Tam programs
- Increase College of Marin participation in Academic Internship Program
- Expand collaboration with high school and middle school science programs to build awareness about Mt. Tam's natural resources, including potential curriculum development for the Wildlife Picture Index Program
- Hire, onboard, and train new One Tam Trails Stewardship Program Coordinator and One Tam Trails Stewardship Program Assistant, to begin implementing One Tam Trails Stewardship program
- Hire, onboard, and train new One Tam Youth and Education Program Manager to continue One Tam's youth engagement efforts and increase the number of long-term partnerships with youth and educational related organizations in Marin

Proposed Projects¹

In 2018 Conservancy staff and agency project proponents met to review each listed project against an amended criterion and scoring threshold. Based on this, the following project work/milestones were identified as priorities for 2019 from the list of eligible One Tam projects.. Additionally, staff agreed that strengthening the connectivity and messaging between the One Tam project and programmatic work (e.g. landscape-scale science, community engagement, youth programs, etc.) would increase engagement and impact.

¹ Potential Projects are contingent on complete project-specific grant/foundation/agency funding and will only be implemented if funds are available & with appropriate board approval of agency budgets. Projects may be implemented by the Parks Conservancy and/or by agency partners. Projects either are, or will be further described on www.onetam.org.

One Tam Projects are arrayed in the three themes below – Wetlands & Waterways; Legacy Projects; and Signature Trail Corridors.

Wetlands & Waterways

Redwood Creek Juvenile Coho Habitat Restoration - This project within Muir Woods will remove a portion of the rock riprap, allowing the creek to form natural habitat features needed for juvenile salmon survival. Rock removal will be targeted to maximize habitat benefits, protect sensitive resources, and avoid impacts to nearby trails.

- Continue fundraising for Phases 1 & 2
- Provide communications support, facilitate community engagement and webpage development
- Support project implementation strategy, including any necessary agreements and contracting
- Initiate Phase 1 restoration

Bothin Marsh - Threatened by rising seas and strong waves caused by climate change, Bothin's shoreline and multi-use path are in danger of flooding/eroding and the marsh may convert to mudflats or become submerged. This project advances a community engagement strategy to develop a vision for near term protection and long term adaptation.

- Provide fund raising support
- Host community engagement activities intended to build interest and enthusiasm for the project
- Develop a vision document for the protection of natural resources, recreation and infrastructure in response to climate change and SLR that would include short and long-term adaption measures, nature-based solutions, and pilot projects.
- Use the Nature Space/Bothin Marsh engagement series as a template for integrating outreach and programs to deepen public participating and understanding of project work. Develop similar model for Roy's Redwoods.

North End Wetland Enhancement and Sea Level Rise Adaptation Project at Bolinas Lagoon - restores critical wetland habitats and reconnects the lagoon to its upland creeks, benefiting numerous wildlife species, reducing flooding on local roads, and allowing the lagoon to shift and expand with storms and sea level rise.

- Increase community engagement and fundraising to support future implementation

Legacy Projects

West Peak – Never fully restored after construction of the Mill Valley Air Force Station, West Peak offers the opportunity to restore critical serpentine habitat, enhance the visitor experience, and improve trail circulation. Building upon the preferred restoration concept developed, advance compliance and fundraising, while continuing community engagement.

- Continue to facilitate outreach and community engagement, working closely with the MMWD and community to build project interest and support.
- Increase fundraising
- Advance California Environmental Quality Act (CEQA) compliance

Forest Health & Resiliency - First seen in Marin County in the mid-1990s, Sudden Oak Death (SOD) has resulted in the death of millions of oak and tanoak trees in California and Oregon. This project will examine

dramatically impacted forest resiliency and health across the mountain. This project studies how different forestry practices affect carbon sequestration, water yield, and reforestation potential in SOD-infested areas.

- Seek funding in partnership with U.C. Davis and CalPoly for science-based pilot project assessment and revegetation
- Integrate community science opportunities for science-based activities, to include LINC involvement
- Provide propagation and revegetation support in partnership with USFS

Roy's Redwoods – Restoration & Sustainable Access - Long loved by the San Geronimo Valley community, Roy's Redwoods Opens Space Preserve offers visitors an immersive experience in an old growth redwood grove. This project will develop conceptual enhancement alternatives for the redwood grove and surrounding environs that maximize resource enhancement and protection opportunities, as well as ensure an engaging and sustainable visitor experience.

- Develop a suite of project alternatives that explore opportunities for enhanced restoration and visitor experience
- Continue community engagement

Potrero Meadow Restoration – The health of this once-vibrant wetland has declined due to the spread of weeds, wear and tear from visitation, and poorly placed roads and trails that cut through the meadow, changing its hydrology and increasing erosion, sedimentation, and maintenance costs. The long-term goals of this project include revitalizing this unique wet meadow habitat and associated rare flora, reducing the footprint of the road, and re-aligning existing trails so that they circumnavigate the wetland, creating new vistas and areas for reflection.

- Initiate preliminary planning and cost development
- Develop an approach for future implementation, to include sequencing and project management
- Explore fundability and fundraising opportunities
- Assess approach for revegetation
- Provide communications support, facilitate community engagement, site walks and webpage development

Dipsea Bridge and Trail, and Deer Park Fire Road – The braided alignment of the storied and much-loved Dipsea Trail and Deer Park Fire Road weave in and out of Mt Tamalpais State Park and Muir Woods National Monument. This project will partially restore the natural drainage patterns throughout the trail corridor, reducing the sediment flowing into Redwood Creek as well as creating safe and sustainable trail alignments to protect natural resources and visitor access well into the future. It includes the installation of the Dipsea Bridge over Redwood Creek, which is tentatively scheduled for 2022.

- Continue Dipsea Trail tread and stone work improvements west of the Redwood Creek crossing
- Initiate Dipsea Bridge schematic design work, fundraising and community engagement

Signature Trail Corridor Projects

Redwood Creek Trail Re-alignment – The Redwood Creek Trail stretches between Muir Woods and Muir Beach. The proposed trail project, with 1.1 miles of realignment and two new bridges over the stream, will provide passage for horses and pedestrians and protect the creek and its inhabitants.

- Initiate fundraising for Phase 1
- Replace washed out bridge

Azalea Hill - Rising above the shores of Alpine Lake, Azalea Hill's unique geology shelters many rare and sensitive plant species, and provides a critical recreational link between the popular Sky Oaks Ranger Station area and the more remote Pine Mountain and Carson Falls. This project will improve or remove the old roads and unofficial trails to reduce erosion and habitat fragmentation and improve the experiences of trail users. It will further protect and restore sensitive serpentine barrens and grasslands to improve rare plant habitat.

- Continue planning and environmental compliance (MMWD)
- Provide communications support, facilitate community engagement, site walks and webpage development
- Explore fundability and fundraising opportunities