

# Echoes of Redwood Creek: Currents of Connection Through Muir Woods



A self-guided experience at  
Muir Woods National Monument



# HOW TO ENJOY THIS JOURNEY AT MUIR WOODS NATIONAL MONUMENT



**BRIDGE 4: A SHARED CURRENT**

Fern Creek Trail

Canopy Trail

Hillside Trail

**CATHEDRAL GROVE:  
FIRE AS STEWARDSHIP**



**BRIDGE 3:  
CURRENTS OF RENEWAL**

**BRIDGE 2:  
THE WATERSHED'S WEB**

As you follow the main path beside Redwood Creek, each stop marked here offers a moment to pause and reflect on a part of the story.



- All hard-surfaced trails (above)
- - - - - Trails (not paved)

ALISON TAGGART-BARONE

RUSSELL BOMBON

## WELCOME PLAZA

Welcome! This self-guided experience starts at the main entrance.



**VISITOR CENTER**



Muir Woods Road

**BRIDGE 1: REDWOOD GIANTS**



**MAIN LOT**

Dipsea Trail



**ANNEX LOT**



Redwood Creek

DIPSEA BRIDGE

## 📍 WELCOME PLAZA

### Introduction: Follow the Flow Through Muir Woods

Welcome to Muir Woods National Monument, a sanctuary where the waters of the Redwood Creek watershed sustain towering coast redwoods. Since time immemorial, water, fire, and Coast Miwok stewardship have shaped this forest, creating a rich, interconnected ecosystem. As you step into this ancient forest, you enter an environment as intricate as the tributaries that feed its life.

This self-guided experience follows Redwood Creek as it winds through the heart of this ecosystem. You'll cross waters that nurture redwoods, explore life-giving relationships between streams and salmon, and learn how the National Park Service, the Golden Gate National Parks Conservancy, and the Federated Indians of Graton Rancheria are working together to care for this place.



**DIRECTIONS:** Step beneath the Muir Woods arch and continue toward Bridge #1.

**REFLECTION:** Find the model of Redwood Creek's watershed in the Welcome Plaza. Where are you on the model? How does water flow here?

Now, pause for a moment. Can you hear the creek flowing? What else do you hear? Take a deep breath in. As you exhale, know you're about to enter a magical place shaped by water, time, and towering trees.

## 🏠 THERE'S SO MUCH TO SEE IN MUIR WOODS



**REDWOOD LEAVES** come in two forms. The flat, needle-like leaves shown here make food from sunlight for the trees. Smaller, scale-like leaves high in the canopy capture fog to increase moisture available to the trees and other life. Can you find both? Ask a Ranger if you need help!



**TANOAK** is a culturally significant plant and an important part of this forest. Many tanoak trees are affected by a fungal disease (Sudden Oak Death). This impacts the forest in many ways, including increasing risk of severe wildfire.



**FIRE SCARS** show signs of past fires, which the forest needs for best health. Mature redwoods' thick bark helps them withstand fire. You'll learn how fire can be beneficial in this tour.



**BANANA SLUGS** and many other animals, plants, and fungi benefit from abundant moisture provided by the watershed and redwoods. Muir Woods is home to an incredible diversity of life from ground to sky.

**REFLECTION:** What else do you notice as you go?

## BRIDGE 1

### Redwood Giants: Anchors in the Stream of Time

The coast redwoods of Muir Woods rise above Redwood Creek, their roots nourished by its steady flow. These ancient trees, some over 800 years old, act as reservoirs. They capture carbon dioxide and fog, and channel moisture to the forest floor and the creek below.

Beneath the soil, redwood roots and fungi connect the trees in a vast underground network. These fungi extend redwood root systems, helping trees absorb water and nutrients. They also enable redwoods to communicate, share resources, and support each other's survival.

#### NATURE'S BOUNTY: How Redwoods Sustain Life

**CLIMATE PROTECTORS:** Redwoods absorb a lot of carbon dioxide, a heat-trapping gas, from the air. They store this carbon in their bodies for centuries. While some carbon dioxide is natural, too much is being released from burning fossil fuels such as coal and oil, and warming our planet. Protecting forests are essential to combating climate change.

**BIODIVERSITY PROMOTERS:** These forests shelter so much life—many species of animals from tiny insects to families of deer, plus countless plants, fungi, and more.

**FOG HARVESTERS:** Redwoods collect fog, which condenses on and drips from their leaves, ensuring a steady flow of water to the forest floor and Redwood Creek even during California's arid summers. It helps water their roots and neighboring plants.

**FIRE RESISTERS:** Redwoods' thick bark protects them during forest fires—essential for the survival of not just the trees themselves, but the entire ecosystem they support.

**REFLECTION:** Redwoods are like anchors in their forests. Who or what are anchors in your life, or in your community? What do they share with redwoods?

**DIRECTIONS:** Continue down the boardwalk until bridge #2. As you walk, notice the soft rush of the creek beside you.

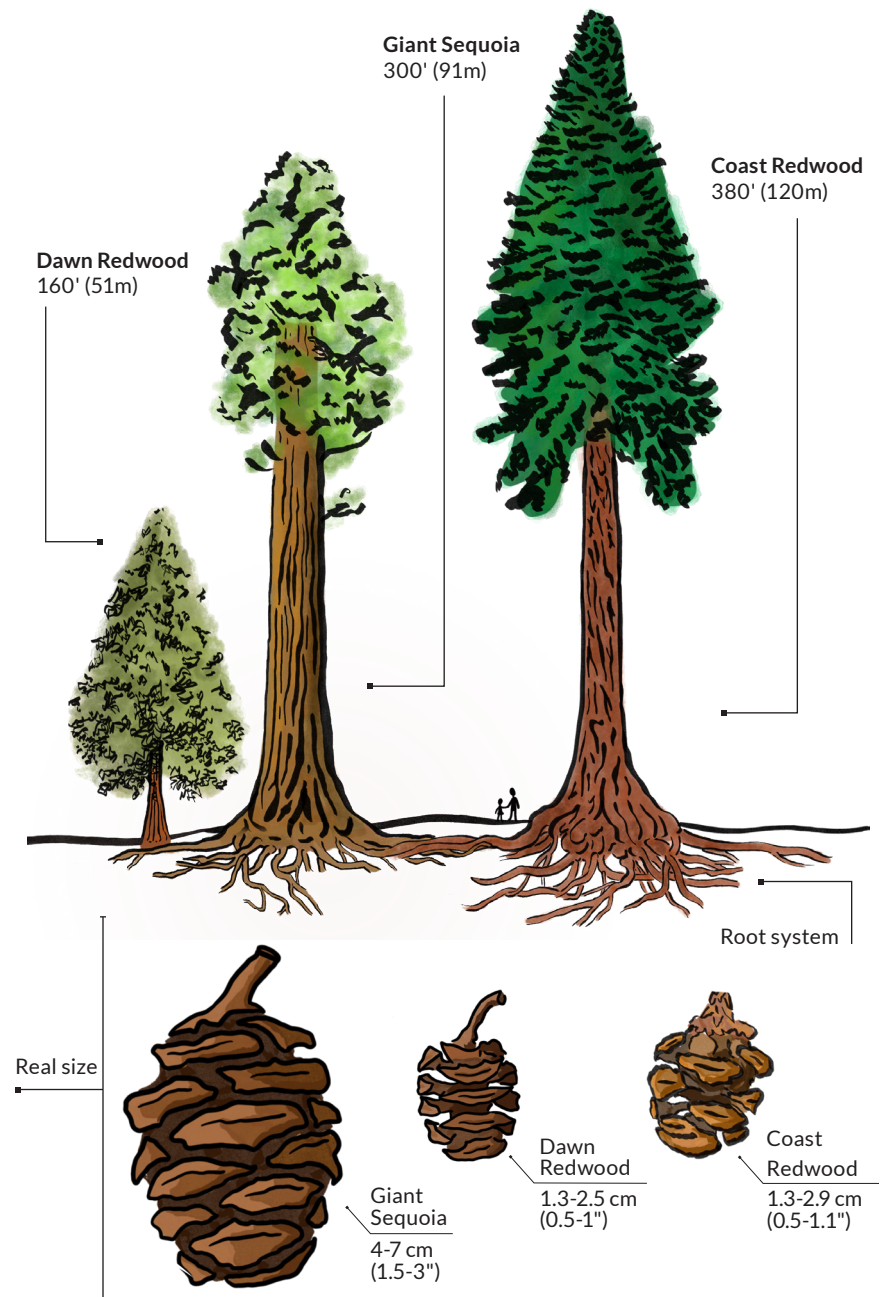


ILLUSTRATION: RYAN KILMER

Three redwood species currently exist in limited ranges. Coast redwoods are the tallest trees on Earth, and grow in a narrow strip along the coast of central California to southern Oregon. Giant sequoias are the largest, some reaching over 30 feet across. They only grow in pockets on the western side of California's Sierra Nevada mountains. Dawn redwoods, the shortest, occur in drainages in the Sichuan and Hubei provinces of south-central China.

## BRIDGE 2

### The Watershed's Web: Life Springs from Redwood Creek

Water is the lifeblood of the redwood forest. Without enough moisture, these towering trees—and all the life they support—couldn't survive. The Redwood Creek Watershed acts like a basin with the creek as its main waterway, collecting enough water for redwoods to thrive here.

#### What Helps Redwood Creek Thrive?

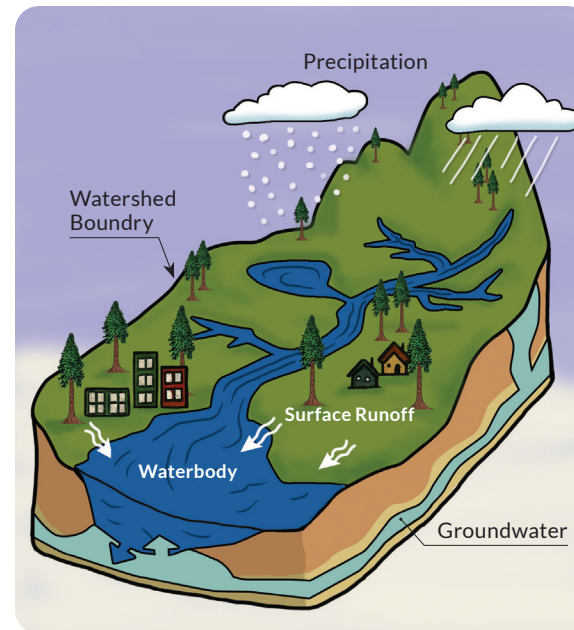
Fog, a near-constant companion, weaves through the canopy delivering additional water directly to the redwoods and the understory plants below. Formed over the Pacific Ocean, moist air is carried inland and pushed up Mount Tamalpais, where it cools and condenses into clouds and fog. This condensed moisture falls as rain, cascading down the mountain's slopes to feed Redwood Creek, or becomes fog drip as it condenses onto redwood leaves high in the canopy.

Redwood Creek is part of a global cycle. The Pacific Ocean's moisture connects this forest to faraway places, reminding us that changes anywhere in the cycle affect life here.

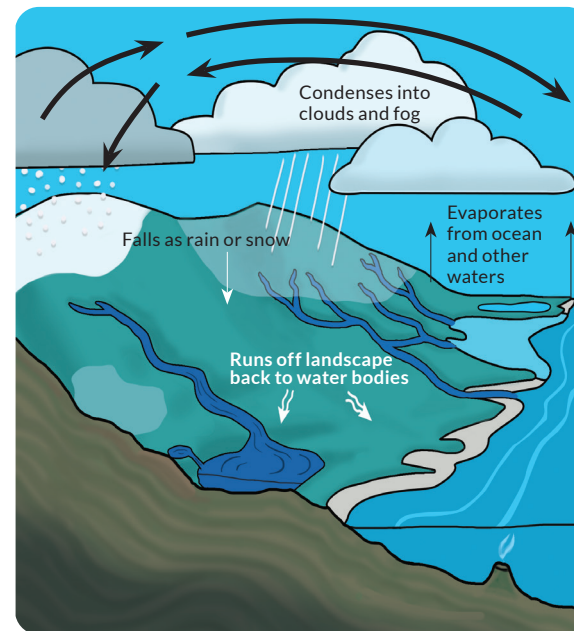
**REFLECTION:** What roles does water play in this forest? Where does it come from, and where is it going? Where does the water in your community come from?

#### A Watershed in Jeopardy:

Once teeming with coho salmon, years of colonization-era changes—channel straightening, vegetation removal, and road construction—reshaped the stream, eroded its gravel beds, and fragmented habitat. Heavy rains added sediment and turbulence, overwhelming the creek's delicate balance and endangering the salmon that once thrived here. But the story of this watershed is not one of loss alone, it's a story of return.



A watershed is an area of land that channels water from rain, snow, and springs into a common body of water, such as a river, lake, or ocean. Watersheds can be any size, with smaller ones nested within larger ones. Their boundaries are determined by land formations and geology which affect water's flow. Watersheds are important because the movement of water across a landscape affects all life within it. Redwood Creek is the center of its namesake watershed.



The water cycle describes the continuous movement of water between the Earth's atmosphere, oceans, and land. This happens through processes including evaporation, condensation, precipitation, and the movement of water across watersheds and by ocean and air currents. Every part of the planet is connected by this cycle.

**DIRECTIONS:** Let the movement of Redwood Creek guide your steps as you follow the path toward Bridge #3. Ahead, the story shifts—from decline to renewal—as community care brings this watershed back to balance.

## BRIDGE 3

### Currents of Renewal: Revitalizing the Redwood Creek Watershed

In 2003, public agencies, community members, resource managers, and the Tribe came together to develop a shared vision to support cross-boundary planning, decision-making, and cooperative management. The Redwood Creek Watershed vision promoted a healthy ecosystem that welcomes people to experience and care for its beauty and history. Today, this vision flows forward through coordinated restoration, science-based management, and a commitment to stewardship.

California State Parks, Marin County Parks, Marin Water, National Park Service, and the Parks Conservancy work across boundaries as the One Tam partnership. One Tam and the Federated Indians of Graton Rancheria are working to heal the land and water. Their efforts form a powerful current of renewal for Redwood Creek through:

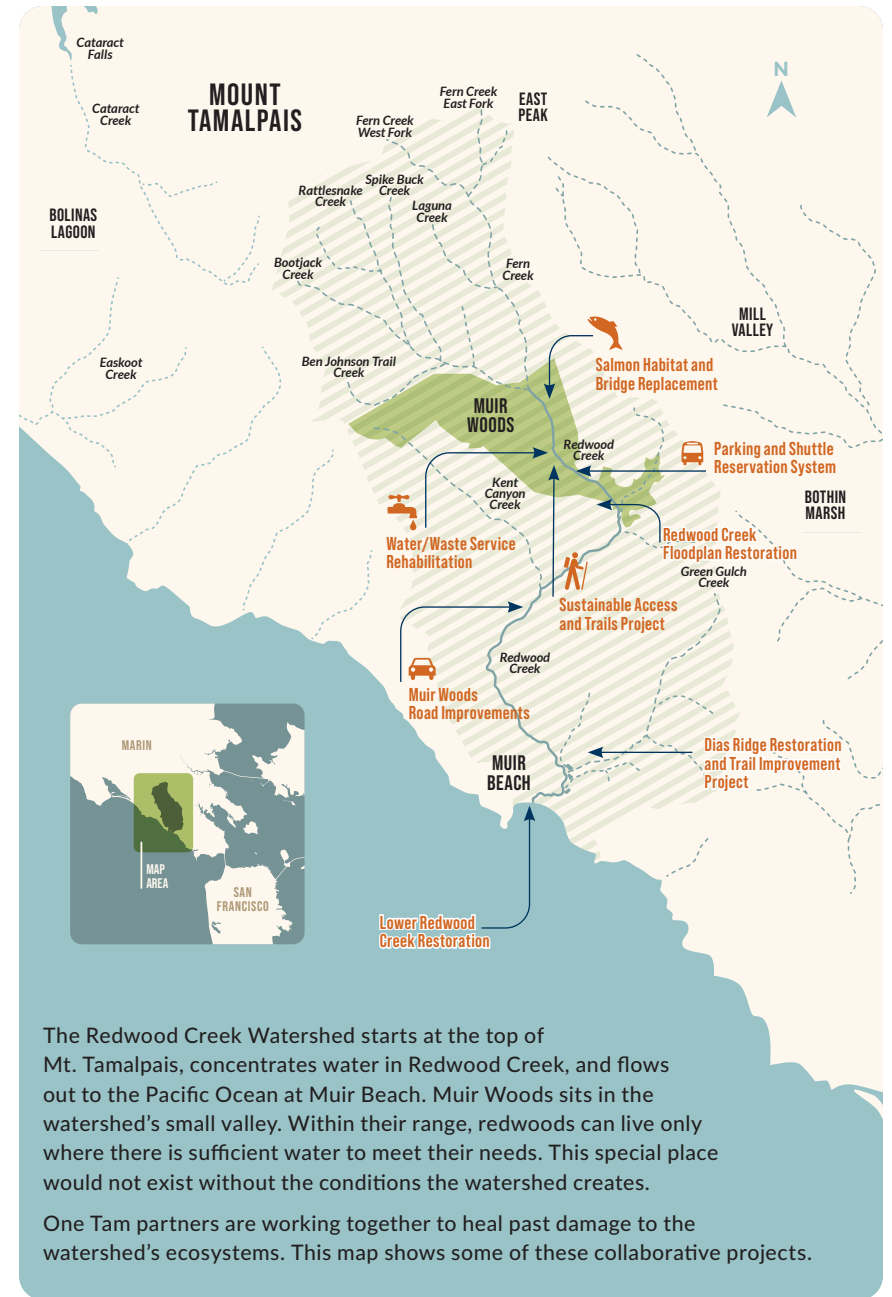
**REPLANTING NATIVE PLANTS:** Their roots stabilize creek banks and provide cooling shade for animals and fish such as salmon.

**RESTORING SALMON HABITAT:** Gravel beds, deep pools, and log jams create places for spawning and shelter.

**REESTABLISHING NATURAL FLOW:** Removing artificial barriers like the boulders that lined the creek for decades, moving sections of trail, and reopening its connection to the ocean, allows the creek to move and adapt naturally. Climate resilience increases through slowing the flow of water, especially during heavy rain, and expanding habitat for all life stages of aquatic species.

This long-term restoration effort is a testament to water's transformative power—one ripple at a time, it reshapes the land and rekindles life. Redwood Creek reminds us that with care and collaboration, renewal is always possible.

**REFLECTION:** As water moves through the landscape, it leaves a lasting impact. What actions are you taking to reduce harm and increase your positive impact on people and place? What have you seen others in your community do?



MAP: LINZY LIM

**DIRECTIONS:** As you enter Cathedral Grove, let the towering redwoods guide your steps. Walk slowly, speak softly—or not at all—and allow space for listening. This path reflects stories of fire and resilience.

## 📍 CATHEDRAL GROVE

### Fire as Stewardship: Beneficial Fire and Partnership with the Federated Indians of Graton Rancheria

All of Marin County, including Muir Woods, is Coast Miwok land. Today, the Coast Miwok are represented by the Federated Indians of Graton Rancheria (the Tribe), the only federally recognized Tribe with ancestral ties to this area. Since time immemorial, the natural processes that occur in Marin's forests provide benefits for all beings in the region, and all these natural processes and beings benefit from Tribal use and stewardship according to the Tribe's ecological knowledge and relationships with the environment.

The Tribe is currently partnering with the National Park Service to bring beneficial fire back to Muir Woods. Beneficial fire includes prescribed burns, pile burning, cultural burning by Tribal peoples, and other kinds of managed fire that restores fire to landscapes to boost ecological resilience.

One Tam continues to consult and collaborate with the Tribe to inform NPS and Parks Conservancy efforts to bring beneficial fire back to Muir Woods and other forest health projects. This collaboration is vital in order to ensure the Tribe's knowledge are part of One Tam's work.

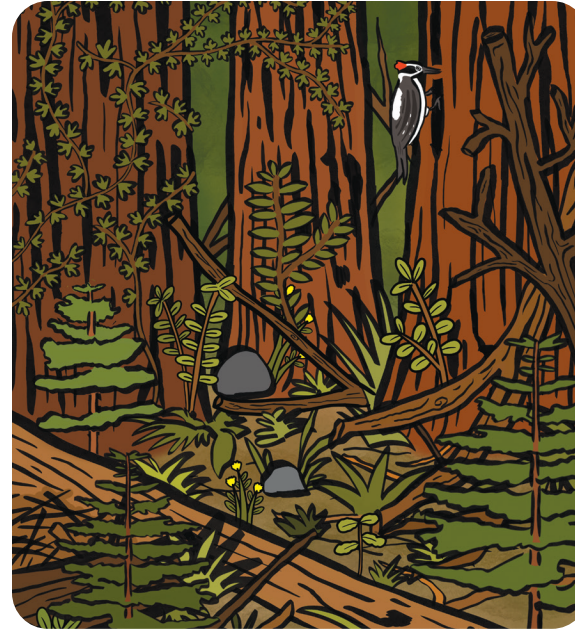
**REFLECTION:** What would your life be like without fire?

#### Beneficial Fire Helps:

**REDUCE FIRE RISK** by clearing away accumulated fuels and protecting old-growth trees and surrounding ecosystems from a high-severity wildfire.

**SUPPORT BIODIVERSITY** stimulating regeneration of fire-dependent species and opening areas for new growth.

**INCREASE RESILIENCE** by restoring an important natural ecological process to the forest.



This image represents a forest in need of beneficial fire. What clues show this? Landscapes of present-day Marin County, and across California, have been shaped by fire for millennia. Decades of fire suppression policies have led to challenges, such as the build-up of excess vegetation on the forest floor and in the understory (fuel).



This image represents a healthier forest that has received beneficial fire. What is different from the image above? Returning beneficial fire to forests like Muir Woods will increase forest health by clearing excess fuels, recycling nutrients, supporting native species, and reducing forest disease and invasive species.

ILLUSTRATION: RYAN KILMER

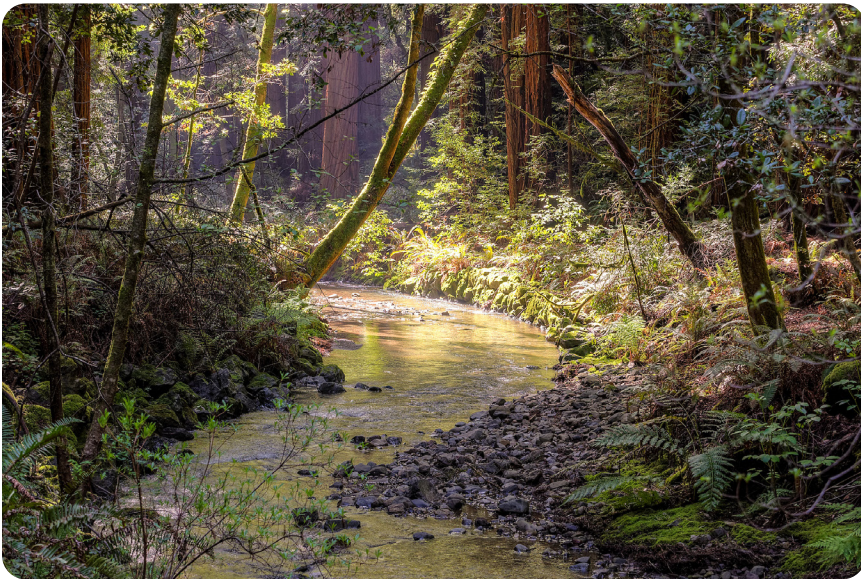
**DIRECTIONS:** As you move beyond the grove, follow the path as it winds gently alongside Redwood Creek. At Bridge #4, we'll explore how all of us can shape the future of places like this.

## A Shared Current: Charting the Future Together

As Redwood Creek winds through Muir Woods, it reflects the deep connections between land, water, wildlife, and people. Each drop reminds us of our shared responsibility to care for these relationships.

Together, we can act as tributaries (small streams) combining into a greater river. We can restore habitat, make choices that support ecological balance, learn about watershed health, or support conservation efforts. Just as Redwood Creek sustains the redwoods and salmon, so too can our collective actions sustain the planet.

Let's move forward as stewards of these lands—here and wherever we live—carrying the lessons of Redwood Creek and remembering that even small ripples can lead to lasting change.



**REFLECTION:** What are ways you can act as a tributary in your community? What other tributaries do you see coming together to make a difference?

## THERE'S MORE!



This self-guided experience is part of a series about our work to help Marin's forests. Each tour showcases a special place and what forest stewardship looks like there.



### TAKE ANOTHER TOUR:

[parksconservancy.org/forestwalks](https://parksconservancy.org/forestwalks)

### LEARN MORE ABOUT:

#### Federated Indians of Graton

**Rancheria:** [gratonrancheria.com](https://gratonrancheria.com)

#### Forest health:

[onetam.org/forest-health](https://onetam.org/forest-health)

**Muir Woods:** [nps.gov/muwo](https://nps.gov/muwo)

You can support this work and get involved, so that Muir Woods and other beloved places will thrive for future generations to enjoy.

### BECOME A MEMBER:

Join One Tam to support this work and to access member events at [onetam.org/membership](https://onetam.org/membership)

### VOLUNTEER:

See opportunities to get involved in caring for our public lands in Marin County at [onetam.org/calendar](https://onetam.org/calendar)

Questions or comments about this self-guided experience can be shared with [info@onetam.org](mailto:info@onetam.org)