



# 2023 Challenge Cost Share Monitoring Report

This report documents and reviews the work completed by the Mount Wilson Bicycling Association (MWBA) and the U.S. Forest Service to maintain and restore recreational opportunities associated with the Gabrielino National Recreation Trail and the Silver Moccasin National Recreation Trail.



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## Overview

The purpose of this monitoring report is to document and review the work completed by the Mount Wilson Bicycling Association (MWBA), U.S. Department of Agriculture (USDA) and the Angeles National Forest (ANF) of the U.S. Forest Service (USFS) in partnership under a Challenge Cost Share Agreement to maintain and restore recreational opportunities associated with the Gabrielino National Recreation Trail (GNRT) and Silver Moccasin National Recreation Trail (SMNRT).





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## Background

Mount Wilson Bicycling Association is a nonprofit 501(c)(3) organization devoted to shared stewardship of multi-use trails in the Angeles National Forest. We advocate for access to high quality local trails and educate the public on sustainable trail use, upkeep and design. We are a community of mountain bikers and stewards with a shared passion for great trails on public lands.



In 2009, the GNRT, and several primary connector trails, were substantially damaged by the Station Fire, the largest wildfire in LA County's recorded history. This trail was popular with many user groups, including MWBA, due to its 28-mile traverse, and easy access from developed trailheads in Pasadena and Chantry Flats above Arcadia. Other nearby recreation sites occur in the vicinity of the trail, with trails connecting them to GNRT. Use was estimated at over 100,000 visitors a year. With high use and continuing damage from fire and other natural causes GNRT requires regular maintenance and technical repairs to allow the public recreational access to ANF via the trail.







The purpose of the Challenge Cost Share Agreement is to document cooperation between the parties to maintain and restore recreational opportunities associated with the GNRT and SMNRT. The agreement also allows the USFS and MWBA to accomplish the shared goals of partner stewardship and increased volunteerism as articulated in the NFTSA and associated National Strategy.







## 2023 Highlights

2023 was the fifth and final year of the cost share agreement and saw a number of multi-year objectives completed. MWBA and the USFS hosted a two-day Trail Stewardship Summit with many local trail stewards in attendance. Ten public trail work days saw MWBA volunteers contribute 1157 hours maintaining and restoring 13.9 miles of USFS multi-use trail, and MWBA contracted professional trail restoration services from partner Belfree Contractors on the Silver Moccasin Trail.





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## Program Objectives

The objectives for this program are defined in the Challenge Cost Share Agreement and in the corresponding Statement of Work.

Objective	Result/Impact
Maintain and restore recreational opportunities associated with the GNRT.	MWBA hosted 10 public workdays in 2023. Under the direction of MWBA trail leads, volunteers performed brush clearance as well as long-term sustainability improvements that reduce maintenance needs over time. MWBA volunteers have cleared the trails for hikers, equestrians, and cyclists. During workdays and in between, MWBA regularly distributes trail courtesy cards and bells to promote responsible sharing of the trails by all trail users.
Increase volunteerism as a means to accomplish greater sustainability of the trail network.	MWBA continues to recruit and train new volunteers who give their time and energy to maintain the trails associated with this program. Volunteer attendance at trail stewardship events is increasing steadily and the feedback from the community has been overwhelmingly positive.
Practice shared stewardship by enhancing partners' leadership role in planning and executing trail work.	MWBA crew leads have been working closely with the U.S. Forest Service staff before and after trail-work events to ensure our plans are approved and executed correctly. U.S. Forest Service staff have joined MWBA volunteers on pre-work scouting days and during trail work.
Increase public awareness and appreciation of national trails such as GNRT, as a component of the overall U.S. Forest Service trails system.	<p>To celebrate the re-opening of the GNRT, MWBA hosted a celebratory event open to the public and attended by U.S. Forest Service staff. Community Members were able to learn about the history of the GNRT and hopefully be inspired to try out the trail. Additionally, MWBA's work on the Gabrielino Trail was featured in an <a href="#">LA Times article</a>, further increasing public awareness about the GNRT.</p> <p>IMBA published <a href="#">two articles</a> and a <a href="#">YouTube video</a> on the Trail Stewardship Summit. IMBA members and the public across the country get to learn about trail stewardship in the Angeles National Forest.</p>



Trail work performed under the agreement meets U.S. Forest Service specifications and guidance.	MWBA Trail Crew leads work closely with the U.S. Forest Service staff to ensure trail work plans are approved and implemented in a compliant manner. Trail maintenance and improvements are performed per the USFS “Standard Trail Plan” document and the Trail Management Objectives (TMOs) for each trail being stewarded. Feedback from U.S. Forest Service staff on planning documents has been positive.
MWBA and the Forest Service shall collaboratively inventory and assess the trails covered in the agreement.	U.S. Forest Service staff have joined MWBA crew leaders to assess trails during the scouting and planning phase. MWBA aggregates feedback from volunteers and other trail users to determine which sections of trail may need to be maintained.
MWBA will hire a professional trail construction organization, to provide technical review and oversight of all identified work locations requiring construction of trail features.	MWBA contracted will Bellfree Contractors to make significant repairs to the Silver Moccasin NRT. More details on the work can be found below.
MWBA and the Forest Service shall collaboratively plan and lead 3 volunteer workdays per year, for years 2019-2022.	MWBA hosted 10 public workdays in 2023. A list of trail workdays with volunteer attendance is included below.
MWBA and the Forest Service shall collaboratively plan and execute at least one Trail Stewardship Summit	MWBA and the Forest Service hosted a well attended and successful Trail Stewardship Summit in Spring 2023. The details of the summit can be found below.
The Forest Service and MWBA, shall inventory and assess all signs along trails listed in this exhibit, and produce a sign plan for the Gabrielino NRT.	MWBA Trail Work Committee members have done two on-site assessments with U.S. Forest Service staff to plan signage for El Prieto Trail. In 2022, MWBA purchased and installed signage for El Prieto Trail, including both navigational and trail courtesy signage.





## Program Outlays

FS Cash to the Cooperator, Column (b)			Outlays to date	Remaining
Gabrelino	Salaries/Labor	\$ 37,250.00	\$ 36,913.91	\$ 336.10
	Travel	\$ 1,440.00	\$ 831.09	\$ 608.92
	Equipment	\$ 6,600.00	\$ 12,151.00	\$ (5,551.00)
	Total Supplies/Materials	\$ 7,600.00	\$ 9,722.33	\$ (2,122.33)
	Trail Trainer Contract	\$ 13,853.12	\$ 10,800.00	\$ 3,053.12
	Trail Construction Contract	\$ 25,000.00	\$ 28,433.55	\$ (3,433.55)
	Total Coop. Indirect Costs	\$ 8,256.88	\$ 8,256.87	\$ 0.01
Silver Moccasin (Addendum)	Salaries/Labor	\$ 12,600.00	\$ 6,006.25	\$ 6,593.75
	Travel	\$ 515.00	\$ -	\$ 515.00
	Equipment	\$ 1,960.00	\$ 1,960.00	\$ -
	Total Supplies/Materials	\$ 840.00	\$ 840.00	\$ -
	Total Coop. Indirect Costs	\$ 1,432.35	\$ 1,432.35	\$ -
<b>Total</b>		<b>\$ 117,347.35</b>	<b>\$ 117,347.34</b>	<b>\$ 0.01</b>
Cooperator Non-Cash Contributions, Column (c)				
Gabrelino	Trail Safety Bells	\$ 4,500.00	\$ 5,414.00	\$ (914.00)
	Trail Contract Grant	\$ 8,000.00	\$ 7,086.00	\$ 914.00
Silver Moccasin (Addendum)	Salaries/Labor	\$ 4,700.00	\$ 4,700.00	\$ -
<b>Total</b>		<b>\$ 17,200.00</b>	<b>\$ 17,200.00</b>	<b>\$ -</b>
Cooperator In-Kind Contribution, Column (d)				
Gabrelino	Salaries/Labor	\$ 30,600.00	\$ 61,330.22	\$ (30,730.22)
	Travel	\$ 1,440.00	\$ 240.00	\$ 1,200.00
	Sign Installation Materials	\$ 1,200.00	\$ -	\$ 1,200.00
Silver Moccasin (Addendum)	Salaries/Labor	\$ 10,200.00	\$ 6,835.33	\$ 3,364.67
	Travel	\$ 1,440.00	\$ 290.16	\$ 1,149.84
	Sign Installation Materials	\$ 400.00	\$ -	\$ 400.00
<b>Total</b>		<b>\$ 45,280.00</b>	<b>\$ 68,695.71</b>	<b>\$ (23,415.71)</b>





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## 2023 In Focus



The Summit gave volunteers and USFS staff a chance to meet in person and talk through the myriad challenges volunteers face when working on trails. In the classrooms volunteers learned about trails that were built to be socially and environmentally sustainable and what it would take to implement them in the field. The next day volunteers broke into smaller groups and put their newfound skills to work building nicks, grade reversals and other types of sustainable drainage.



### Trail Stewardship Summit

MWBA partnered with the Forest Service to plan and host a two-day Trail Stewardship Summit for trail stewards in the Angeles National Forest. The Summit was funded as part of the challenge cost share agreement, and IMBA Trail Solutions provided the instructors a curriculum. A number of local non-profits representing various user groups and USFS staff participated in a day of classroom education and a day of field work on the Silver Moccasin NRT.







IMBA shared a great series of articles and a YouTube video summarizing the event.

[Breaking Tread: Paving the Way for Inclusive Trail Stewardship \(Part I\)](#)

[Breaking Tread: Paving the Way for Inclusive Trail Stewardship \(Part II\)](#)

[MWBA & LoweLifes: Trail Stewards of the Angeles National Forest | Los Angeles, CA](#)





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## Contractor Work on Silver Moccasin

MWBA worked with the USFS and a private trail contractor to perform professional sustainability improvements on Silver Moccasin Trail in 2023. As one of the three designated National Recreation Trails in the Angeles National Forest, Silver Moccasin Trail provides a diverse and beautiful corridor for multi-use recreation and connectivity in the San Gabriel High Country.



**Before:** A deeply channelized switchback with major erosive damage from water flowing through the corner.



**After:** The corner is armored with rocks and the deep channel is filled with durable materials. New drains installed above the corner will slow future erosion.

MWBA trail leaders identified the section of trail directly North of the Chilao Visitor center as a candidate for professional trail contractor work. The alignment in this area is notably steep and heavily trafficked by hiker and bicycle traffic, with potential equestrian traffic from nearby Horse Flats campground. The trail tread on the work site has sections of exposed bedrock, decomposed granite, and rocky outcroppings. The trail alignment features numerous seasonal drainage crossings, with the switchbacking trail repeatedly crossing the same set of drainages. Directly below most of these crossings, the trail exhibited major erosive wear due to poor drainage. The tread was severely channelized, and made walking, bicycling, or equestrian use unpleasant at best, and treacherous at worst. Compounding the drainage damage was a series of legacy wooden step-downs installed in order to fill previous channelization problems. These step-downs were heavily eroded, and in some cases were “floating” across the channel, presenting a clear tripping hazard to all trail users.





**Before:** Highly eroded legacy peeler pole steps with deeply channelized tread are difficult for hikers and dangerous for cyclists.

**After:** Steps and channelized tread is rock armored, and drains are installed uphill to prevent future erosion.

MWBA coordinated a site visit with USFS personnel, a professional trail contractor, and a volunteer leader from the Boy Scouts of America (BSA) to review the symptoms and plans for the trail. MWBA identified the drainage issues present on the trail, and created a site plan for MWBA, BSA, and the contractor to follow. MWBA and BSA volunteers each hosted a separate work day on adjacent sections before the contractor work began.

The contractor work was approved and began in January 2023. Shortly after, a series of atmospheric rivers swept through Southern California, and the contractor work was paused for the team to address emergency projects elsewhere in the region. In April, another storm severely damaged SR-2 and prevented access to the Silver Moccasin worksite. In July, MWBA worked with the USFS and Caltrans to allow administrative access to the worksite. The contractor team resumed work and completed the planned work before the late August deadline.





**Before:** Wooden steps are directly in drainage, and water erosion is causing users to avoid using the steps, widening the trail corridor.



**After:** Steps are deconstructed and the trail is shifted out of the drainage path. The tread is armored with local rock, and the corridor is narrowed with vegetation.

As a result of this project, Silver Moccasin Trail is significantly more sustainable to future storms and user wear. The water erosion observed on the trail in late 2022 has been repaired, and the underlying cause of the damage has also been corrected. Between contractor and volunteer work, 29 natural surface drains were added or enhanced between Horse Flats Campground and Chilao Road. 5 switchbacks were armored to protect against user wear. Every wooden step down in good condition was armored to prevent damage during future storms, and to make them more multi-use friendly. All failed step downs were removed from the trail. The end result is a trail that is more fun for users, safer for all, and will require significantly less volunteer upkeep in the coming years.



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## 2023 Public Trail Work Summary

Date	Trail Name	Trail Number	Trail Work Mileage	Volunteer Count	Total Volunteer Hours
22-Oct	Silver Moc	11W06	1.0	20	100
23-Oct	Silver Moc	11W06	1.0	15	75
20-Nov	Silver Moc	11W06	0.8	13	69
11-Dec	El Prieto	12W27	0.1	12	50
22-Jan	Sunset Ridge Trail	12W18	0.7	40	207
18-Feb	Middle Sam Merril	12W14	1.2	23	116
19-Mar	El Prieto	12W27	1.5	35	178
15-Apr	Gabrielino (Red Box)	11W14	2.3	32	161
28-May	Gabrielino (Red Box)	11W14	1.4	28	142
17-Jun	Valley Forge	1312W09	0.4	24	109
19-Aug	Sunset Ridge Trail	12W18	1.5	16	79
17-Sep	Gabrielino (Gould Mesa)	11W14	2.0	35	159
<b>Totals</b>			<b>13.9</b>	<b>293</b>	<b>1443</b>