

DEC
2023

FINAL



Table of Contents

Project Overview	page 14
Stakeholder Feedback	page 28
Approaches to Area Challenges	page 36
Management	page 38
Camping	page 46
Climbing Rangers	page 49
Education.....	page 52
Habitat Destruction	page 55
Maintenance and Staffing	page 58
Overcrowding	page 61
Parking	page 64
Trails	page 67
Tribal Involvement	page 70
Wildfires	page 73
Next Steps and Implementation	page 76
Appendix A: Funding Sources	page 104
Appendix B: Community Feedback	page 112
Appendix C: Biological Constraints Analysis	page 118
Appendix D: Tribal Engagement	page 281

Acknowledgments

FUNDING

The Buttermilk Infrastructure and Recreation Planning Initiative was supported by a grant from the National Fish and Wildlife Foundation.

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions of the National Fish and Wildlife Foundation or its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the National Fish and Wildlife Foundation or its funding sources.

UNITED STATES FOREST SERVICE (USFS)

The USFS is an agency within the U.S. Department of Agriculture that is responsible for sustaining the health, diversity and productivity of the nation's forests and grasslands. The USFS provided guidance, support and feedback to the project team in the creation of this document.

The views and conclusions contained in this document are those of the authors and is not a commitment of the Forest Service. The interpreted representation of public comments, and opinions of the author does not constitute endorsement and/or actionable items from the Forest Service.

PROJECT TEAM

Eastern Sierra Council of Governments (ESCOG)

The ESCOG is a Joint Powers Authority (JPA) agency made up of the following member agencies: City of Bishop, the Town of Mammoth Lakes, Inyo County, and Mono County.

The ESCOG coordinates regional planning and economic development efforts throughout the Eastern Sierra, working cooperatively with local, state and federal partners to support community development, economic diversification, sustainable recreation, ecosystem management and climate resiliency for a more prosperous, sustainable, and resilient region.

The ESCOG managed this planning effort and conducted outreach with the public and with stakeholders. The ESCOG worked closely with the consultant team to develop materials and provide resources for this report.

For more information visit essrp.org.

Alta Planning + Design (Alta)

Alta is an international consulting firm with a mission to create active, healthy communities. Alta works to mitigate climate change and advance safety and social justice through sustainable mobility. Alta connects people to places by providing solutions across the disciplines of planning, design, engineering, education and encouragement programs, and community engagement. For more information, visit altago.com. Alta led the consultant team in the completion of this planning effort including leading community and stakeholder outreach and developing this report.

Mammoth Lakes Trails & Public Access Foundation (MLTPA)

The Mammoth Lakes Trails and Public Access Foundation, MLTPA, is a 501(c) 3 non-profit organization incorporated in 2007 as a public benefit corporation in the State of California. MLTPA has been engaged with local and regional issues of sustainable recreation and collaboration in California's Eastern Sierra since its inception and provides technical support to a regional public/public recreation-based solution, the Eastern Sierra Sustainable Recreation Partnership.

For this effort, MLTPA provided a variety of services, including grant and project management, meeting content development, research, meeting convening, public and participant communications, and document production. Visit mltpa.org for more information on our work.

HELIX Environmental Planning (HELIX)

HELIX is a leader in environmental consulting and natural resource sustainability. HELIX has extensive experience helping public and private clients comply with environmental laws and regulations, manage natural

and cultural resources, and design and construct sustainable projects. HELIX Environmental Construction Group, specializes in habitat restoration and the installation and maintenance of native habitat. For more information about HELIX visit helixepi.com.

HELIX led the completion of the biological constraints analysis memo for this planning effort.

THE EASTERN SIERRA RECREATION PARTNERSHIP

The Eastern Sierra Sustainable Recreation Partnership (ESSRP) is a unique public/public partnership among local Eastern Sierra governments, state agencies, and federal agencies.

In July of 2018, a Non-Funded Challenge Cost-Share Agreement was signed between Mono County; the Town of Mammoth Lakes, California; and the U.S. Department of Agriculture Forest Service Pacific Southwest Region, Inyo National Forest and Intermountain Region, and Humboldt-Toiyabe National Forest memorializing the Eastern Sierra Sustainable Recreation Partnership (ESSRP).

For more information, please visit: <https://mltpa.org/essrp/sustainable-recreation-and-tourism-project>.

THE SUSTAINABLE RECREATION AND TOURISM INITIATIVE

In spring 2019, the Sierra Nevada Conservancy's Governing Board demonstrated a pioneering commitment to rural California's outdoor recreation economy and natural resources by authorizing Proposition 68 funding for the "Sustainable Recreation and Tourism Initiative," a project to benefit the conservancy's eastern subregion, including Inyo, Mono, and Alpine counties.

The initiative supports the ESSRP in its goals to "... design, plan, implement, and report out projects to improve and maintain recreational opportunities as well as restore ecosystems to their natural resiliency and functions." The initiative is composed of four tracks, or areas of focus, with specific deliverables: Regional Recreation Stakeholder Engagement; Climate Adaptation & Resilience Assessment; Connection to the Eastern Sierra Visitor Audience; and Project Development & Prioritization for Funding.

Land Acknowledgment

Some lands in the United States hold the creation stories, burial grounds, and ceremonies of Indigenous people who were forcibly removed from their ancestral homes during territorial acquisition.

Many tribes, comprised of different bands, live in the Eastern Sierra region, caring for their native lands as they coexist with the ongoing impacts of colonization, in the Buttermilk Project Area predominantly the Nüümü (Paiute) people.

The Nüümü place name for the Owens Valley is Payahuunadü (The Place Where Water Flows). In Buttermilk Country we acknowledge Wünübü (Mt. Tom) and Paunibü (his wife, on his right hand side, Basin Mountain).

This acknowledgment is an invitation to all organizations, residents, and visitors to recognize the way this history has shaped the present as all parties work together in anticipation of a better future.

Glossary

Bouldering

A type of climbing involving climbing large boulders using only crash pads placed on the ground.

Buttermilk Infrastructure and Recreation Planning Initiative (BIRPI)

This document. A planning process to improve existing recreational infrastructure, create a focused recreation plan for the Buttermilk recreation area, and inform a long-term conceptual recreation plan for the Buttermilk Project Area.

Bureau of Land Management (BLM)

An agency within the U.S. Department of the Interior with land management responsibility for the public domain lands.

Buttermilk Country

The area of land surrounding and including the Buttermilk Boulders, a famous climbing destination.

Buttermilk Project Area

The specific area addressed by this document including Buttermilk Road and the main bouldering area.

California Department of Fish and Wildlife (CDFW)

An agency within the California government managing the state's wildlife and native habitats.

California Environmental Quality Act (CEQA)

A California statute requiring all public agencies to follow a protocol of analysis and public disclosure of the environmental impacts of a project.

Crash Pad

A large foam pad placed on the ground used while bouldering as protection when falling.

Cultural Resources

An object or definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral evidence. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, places, or objects and traditional cultural properties.

Dispersed Camping

Camping outside of designated campgrounds.

Eastern Sierra Council of Governments (ESCOG)

A joint powers authority agency made up of the City of Bishop, the Town of Mammoth Lakes, and the counties of Inyo and Mono to coordinate regional planning and economic development throughout the Eastern Sierra.

Eastern Sierra Interpretive Association (ESIA)

A 501(c)3 non-profit and designated interpretive organization for the Inyo National Forest that educates the public about the Sierra Nevada and Great Basin lands through interpretive products, exhibits, and programs.

Eastern Sierra Sustainable Recreation Partnership (ESSRP)

A public-public partnership comprised of federal, state and local agencies working to improve and plan for recreation in the Eastern Sierra.

Los Angeles Department of Water and Power (LADWP)

A municipal utility providing water and power to the City of Los Angeles and a primary land owner in the Eastern Sierra, including in the Project Area.

Mammoth Lakes Trails and Public Access Foundation (MLTPA)

A non-profit that creates sustainable trail and recreation systems to support prosperous economies and healthy communities in Mammoth Lakes and the Eastern Sierra.

National Environmental Policy Act (NEPA)

A federal law requiring federal agencies to evaluate the environmental impact of a project through Environmental Impact Statements and Environmental Assessments.

Nüümü (Owens Valley Paiute)

The native peoples of the Owens Valley, comprised of multiple tribes, including the Bishop Paiute Tribe adjacent to the study area. Tribal coordination and communication is critical to this project and future projects in the area.

Off Highway Vehicle (OHV)

Any off road vehicle, especially those designed for trails.

Riparian Area

An area with distinctive hydric soils and vegetation typically between a stream, spring, seep, or other body of water, and the adjacent upland area consisting of vegetation that requires free, or unbound, water for survival.

Road Maintenance

The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Social Trails

Unofficial trails created by the public to access other recreation sites of points of interest.

Stakeholder

Person that has an interest in a certain topic. Stakeholders in this document refer to community members and visitors, local businesses and organizations, land managers, native peoples and anyone else with an interest or concern about the BIRPI Project Area.

United States Forest Service (USFS)

Federal public lands management agency within the United States Department of Agriculture (USDA). The Forest Service is responsible for sustaining the health, diversity and productivity of 193 acres of forest and grasslands across the nation.

Wildfire

An unplanned, unwanted wildland fire, including unauthorized human caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fire where the objective is to put the fire out.

Contacts

BISHOP PAIUTE TRIBE

Tribal Office

50 N Tu-Su Ln, Bishop, CA 93514
Phone: (760) 873-3584

BLM

Bishop Field Office

351 Pacu Lane Suite 100
Bishop, CA 93514-3101
BLM_CA_Web_BI@blm.gov
Phone: 760-872-5000

CDFW

Inland Deserts Region Field Offices

787 North Main Street, Suite 220
Bishop, CA 93514
Phone: (760) 872-1171

ESCOG

ESCOG Physical Address

437 Old Mammoth Road Suite #230
Mammoth Lakes, CA 93546
Phone: (760)878-8800
Email: escoginfo@gmail.com

ESIA

ESIA HOME OFFICE

190 East Yaney Street
Bishop, CA 93514
Phone: (760) 872-1220
Email: admin@esiaonline.org

ESSRP

Email: info@essrp.org

INYO COUNTY BOARD OF SUPERVISORS

Physical Address

224 N. Edwards St.
Independence, CA 93526
Phone: (760) 878-0373

INYO COUNTY PUBLIC WORKS

Inland Deserts Region Field Offices

168 North Edwards St.
Independence, CA93526
Phone: (760) 878-0201

LADWP

LADWP Eastern Sierra

300 Mandich Street
Bishop, CA 93514
Phone: (760) 873-0251
Email: owensvalleycommunity@ladwp.com

MLTPA

MLTPA Mailing Address

1934 Meridian Blvd.
Mammoth Lakes, CA 93546-0100
Phone: (760) 934-3154
Email: info@mltpa.org

USFS

Mt. Whitney Ranger Station

640 South Main Street/ P.O. Box 8
Lone Pine, CA 93545
Phone: (760) 876-6200

White Mountain Ranger Station

798 North Main Street
Bishop, CA 93514
Phone: (760) 873-2500

Inyo National Forest Supervisor's Office

351 Pacu Lane Suite 200
Bishop, CA 93514-3101
Phone: 760-873-2400



Buttermilk Infrastructure & Recreation Planning Initiative (BIRPI) Executive Summary

PROJECT BACKGROUND

The Buttermilk Infrastructure and Recreation Planning Initiative (BIRPI) aims to improve existing recreational infrastructure, inform a focused recreation plan for the Buttermilk recreation area, and inform a long-term conceptual recreation plan for the Buttermilk Project Area (Figure 1). The Buttermilk Project Area includes the parking and camping areas along Buttermilk Road and the primary climbing area and recreation area in Buttermilk Country. This document represents the first step in capturing public and agency concerns and hopes for the area, and consolidating potential future actions.

STAKEHOLDER ENGAGEMENT

This planning effort was a stakeholder driven collaborative process. Community engagement, including online public input maps, community meetings, and one-on-one meetings, helped the project team discover the most pressing issues in the area and stakeholder's thoughts on potential solutions. During the engagement process it became clear that the area of concern for most stakeholders centered around the Buttermilk Boulders.

COLLABORATION IS KEY

The more extensive solutions introduced in this document cannot be implemented until an organizational body is formed to manage the area and determine specific projects to advance. This group should be formed in partnership with the managing agencies, stakeholders, and organizations identified in this document. The organization must have decision-making power in the management of the Buttermilk Project Area. Formation of a consensus based management body encompassing all land management authorities will be necessary to identify appropriate implementation actions reflecting the priorities and input captured within this document.

CHALLENGES AND ALTERNATIVES

Area challenges relayed by the public were organized into twelve categories:

- ◆ Management
- ◆ Buttermilk Road
- ◆ Camping
- ◆ Climbing Rangers
- ◆ Education
- ◆ Habitat Destruction
- ◆ Maintenance
- ◆ Overcrowding
- ◆ Parking
- ◆ Trails
- ◆ Tribal Involvement
- ◆ Wildfires

A range of solutions for the challenges within each category were created through community and agency outreach. This document presents the range of alternative solutions to each challenge, and displays the type of feedback received from the community.

Some alternatives, like constructing paved roads or parking lots, created divided public opinion. Other alternatives, like creating an educational program for visitors, drew a more unified positive response.

NEXT STEPS

This document offers suggestions for next steps the USFS and other land managers may be able to take, either before, during, or after the creation of a management body. This includes establishing baseline data, such as carrying capacity, traffic counts and trends, and geolocating dispersed camping sites to establish a process for removing new sites.

Additionally, the alternatives that received high support can be immediately considered for implementation such as wayfinding and regulatory signage, a welcome kiosk, increased volunteer activity, and the decommissioning of unauthorized trails.

This process identified concerns, gaps, and infrastructure needs through public input from a spectrum of user groups and stakeholders. Given the interrelated nature of recreation in the Buttermilk Project Area involving multiple management authorities, this effort represents an initial public process to inform future land management decisions.

Figure 1. BIRPI Project Area



BIRPI PROJECT AREA

Legend

Boundaries

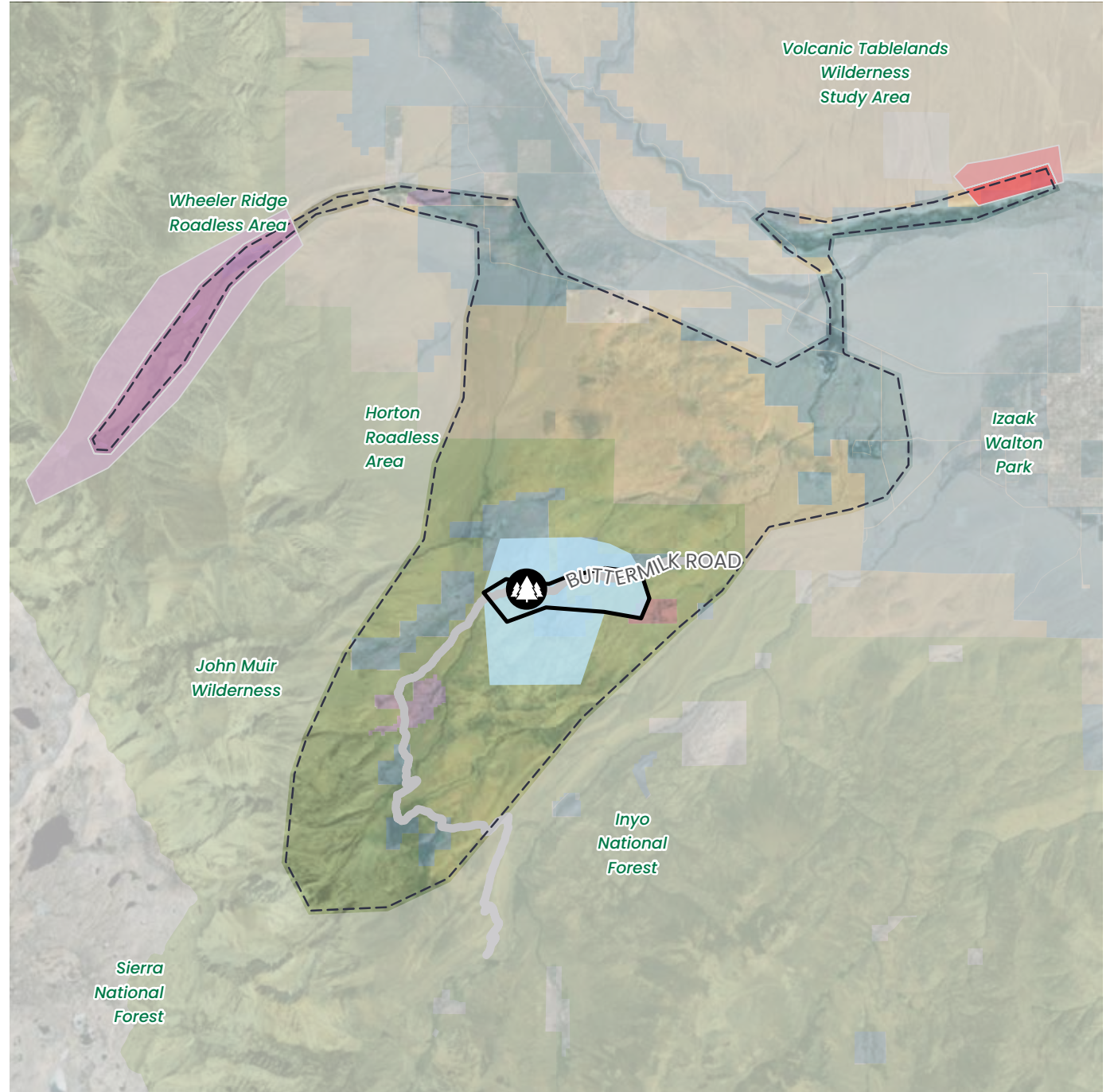
- Buttermilk Project Area
- Primary Climbing Area

Boundaries

- Buttermilk Country
- Happy and Sad Boulders
- Pine Creek Canyon

Primary Land Managers

- BLM
- LADWP
- USFS
- Unincorporated Inyo County
- Private Land
- C.A. Fish and Wildlife



Preamble

The Buttermilk Infrastructure and Recreation Planning Initiative (BIRPI) was created to improve existing recreational infrastructure, develop a focused conceptual recreation plan for the Buttermilk recreation area, and inform a long-term conceptual recreation plan for the Buttermilk Project Area (Figure 1). This planning effort was a stakeholder driven collaborative process that documented recreation impacts to the land such as on trails, roads, and parking.

In recent years, Eastern Sierra communities and management agencies have established a shared vision for sustainable recreation and tourism through the Eastern Sierra Sustainable Recreation Partnership (ESSRP). The ESSRP sponsored the Eastern Sierra Sustainable Recreation and Tourism Initiative (SRTI) through a grant from the Sierra Nevada Conservancy (SNC) using California Proposition 68 funding.

Over 200 project ideas were submitted to the SRTI by the Eastern Sierra community and ESSRP, which were then graded and weighted in a public process to determine projects with the greatest potential. A total of 26 of those project ideas had a reference to the need for improved sustainable recreation opportunities and management in the larger BIRPI Project Area, which includes Pine Creek Canyon and the Happy/Sad Boulders, and three projects were directly related to the Buttermilk Project Area. These three projects included a request for new infrastructure such as bathrooms, trails, and roads to reduce impacts to the land; a request for a management plan for traffic and dispersed camping in the area; and a request to install a campground to reduce dispersed camping.

The BIRPI planning effort is the first step in developing a management plan for the Buttermilk Project Area. It began in December 2022 and was completed in December 2023.





Project Overview

01

Project Overview

The Buttermilk Infrastructure and Recreation Planning Initiative (BIRPI) is a collaborative planning process between Alta Planning and Design, the Mammoth Lakes Trails and Public Access Foundation and Helix Environmental Planning to identify and address the opportunities and challenges present in the climbing areas near the City of Bishop, California.

The intent of this project was to convene community discussions about the current and future recreational needs in the BIRPI Project Area, particularly in the Buttermilk Project Area; identify the concerns of stakeholders through facilitated discussions; and report the areas of consensus and need for further action to the land management agencies.

Correlated with the boom in the sport of climbing, especially bouldering, the number of visitors in the Buttermilk Project Area has increased rapidly. However, the area does not have

the infrastructure nor management system to handle the current or anticipated increased popularity of recreating in the Project Area. As a result, both natural and cultural resources are threatened by increased visitor volume.

This Initiative document describes the outreach process and discusses the challenges and opportunities identified through that process. This document includes initial solutions for addressing each identified challenge, such as the need to develop a clear process for ongoing management, an increase in education, and tribal inclusion and representation in decision-making. This Initiative document does not make specific action recommendations as it is premature to do so prior to the establishment of a consensus for the area's management by the relevant land management agencies. A biological constraints analysis was also completed as a part of this effort (Appendix C).



Project Vision

Understand the concerns and hear potential solutions from area stakeholders to create a well-maintained, safe, and accessible destination that supports a range of recreation while protecting the sensitive natural ecosystem and cultural resources of the area.

Project Area

The BIRPI Project Area (Figure 2) in the Eastern Sierra includes Buttermilk Country, the Happy and Sad Boulders, and Pine Creek Canyon. During the public engagement process it became clear that the Buttermilk Project Area (Figure 3) was the highest priority for the public rather than other nearby recreational spaces. Due to the density of boulders (Figure 4) this area is the most popular destination for recreation users, particularly climbers, and as a result there have been challenges in protecting the land and maintaining facilities.

Based on input received, the Buttermilk Project Area has the highest concentration of infrastructure needs to address the direct impacts associated with the population density of use, such as targeted education, toilet infrastructure and trail delineation, as well as adjacent impacts, such as managing for dispersed camping, wildfire risk and parking delineation.

Due to the unique conditions in this Project Area, the following Initiative document is not intended to address issues in the entire BIRPI area including the Happy and Sad Boulders and Pine Creek Canyon area. There are still challenges in both of these other areas, and future solutions at the Happy and Sad Boulders and Pine Creek Canyon can be inspired by this document.

The major concerns in the Buttermilk Project Area have to do with accessibility and land degradation surrounding the climbing areas rather than the boulder field itself. These issues include erosion and degradation of vegetation from cars, camping, hiking, climbing and dumping. There are also issues related to graffiti and human and pet waste. These challenges are particularly difficult to address due to the multiple land managers in the area, each of which have their own policies and rules related to recreation. As more people visit the Buttermilk climbing area, it is important for the landowners to identify strategies and infrastructure to accommodate the increasing number of visitors and minimize environmental impact.



During the public engagement process stakeholders brought up the challenges related to Buttermilk Road, including dust.



Figure 2. BIRPI Project Area






BIRPI PROJECT AREA

Legend




Boundaries

-  Buttermilk Project Area
-  Primary Climbing Area

Boundaries

-  Buttermilk Country
-  Happy and Sad Boulders
-  Pine Creek Canyon

Primary Land Managers

-  BLM
-  LADWP
-  USFS
-  Unincorporated Inyo County
-  Private Land
-  C.A. Fish and Wildlife

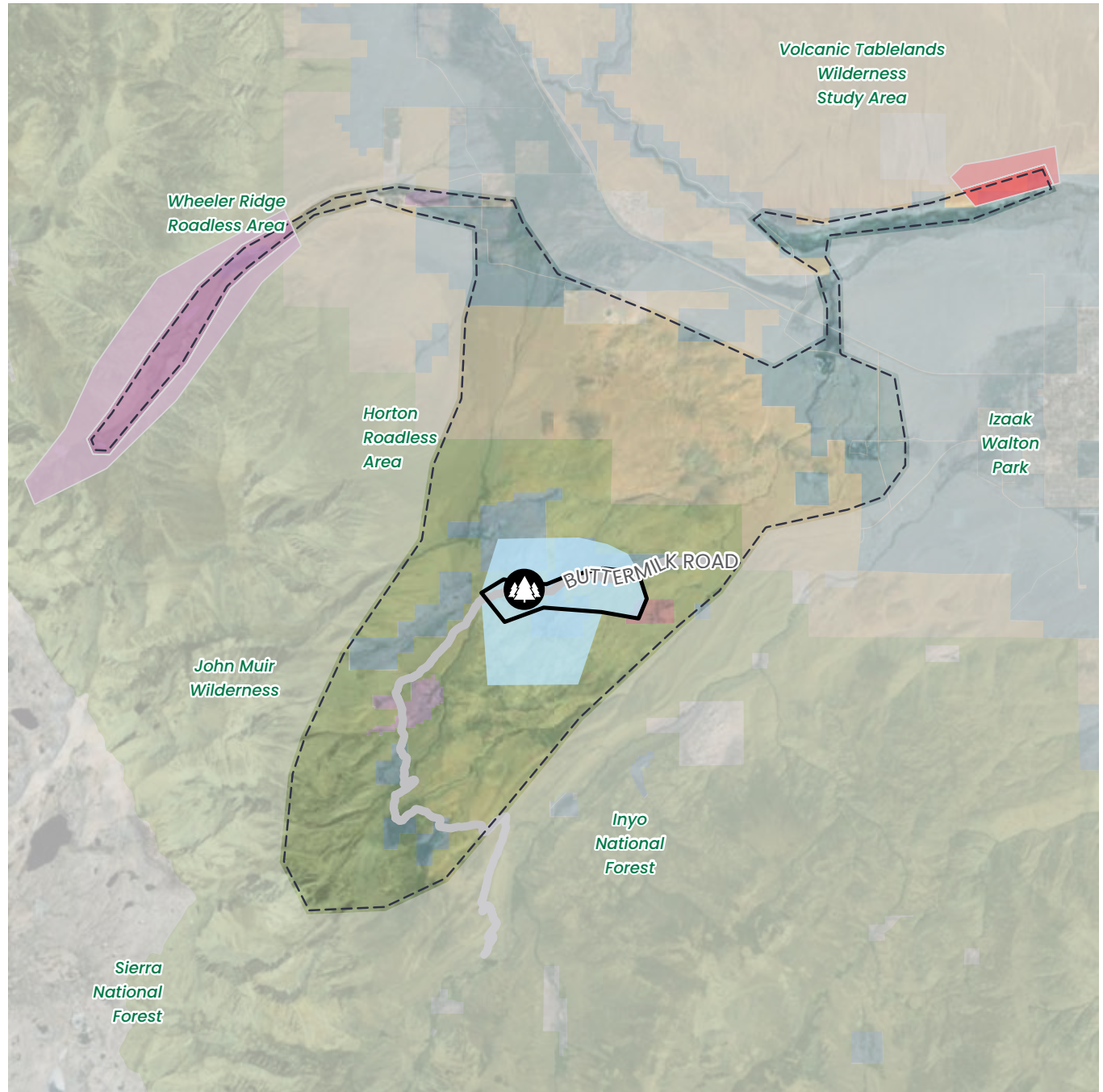


Figure 3. Buttermilk Project Area



BUTTERMILK PROJECT AREA

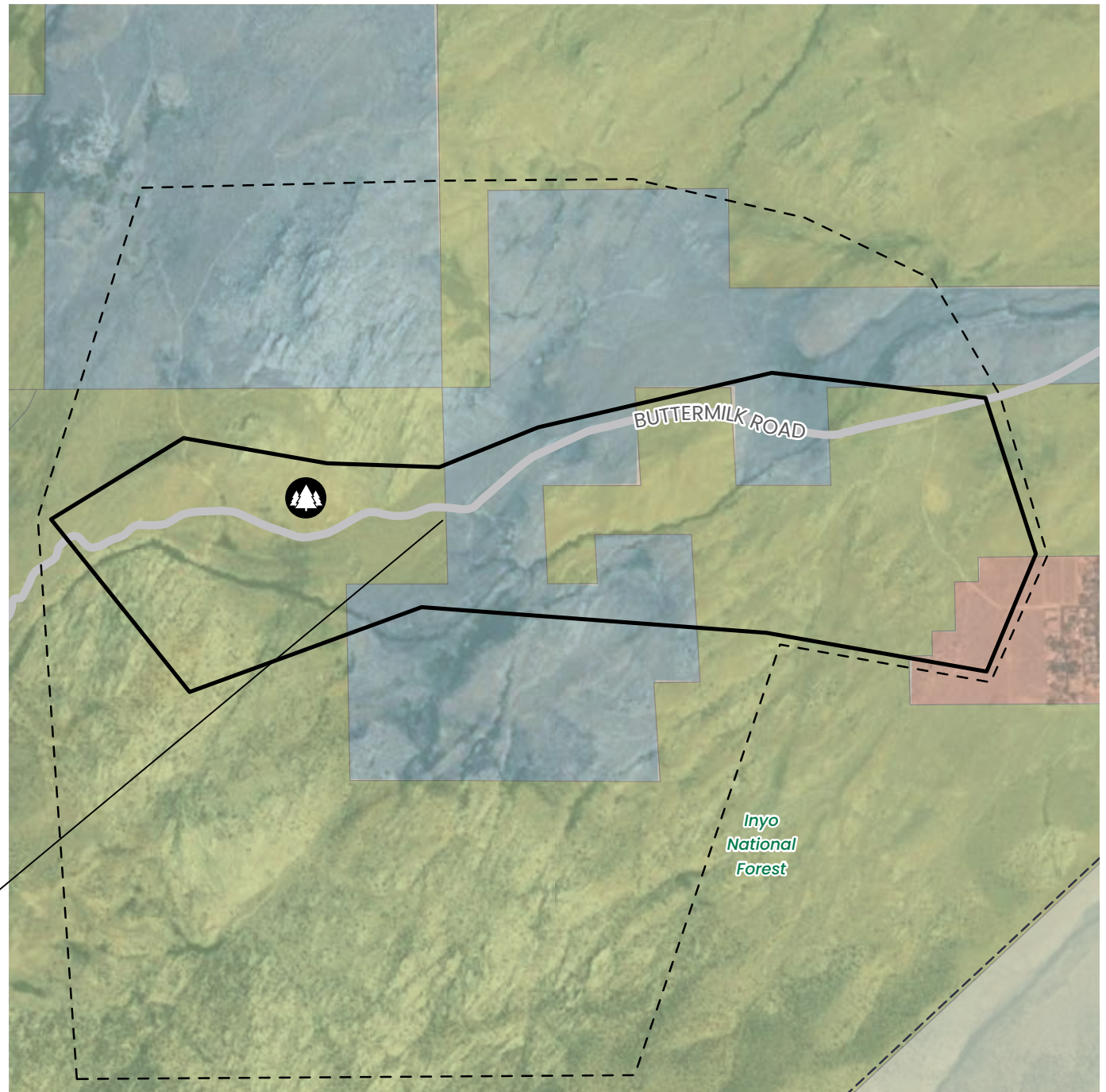
Legend

Boundaries

- Buttermilk Project Area
- Buttermilk Country
- Primary Climbing Area

Primary Land Managers

- BLM
- LADWP
- USFS
- Unincorporated Inyo County
- Private Land



Buttermilk Road is currently maintained by Inyo County



0 0.2 0.4 MILES








Figure 4. Primary Climbing Area

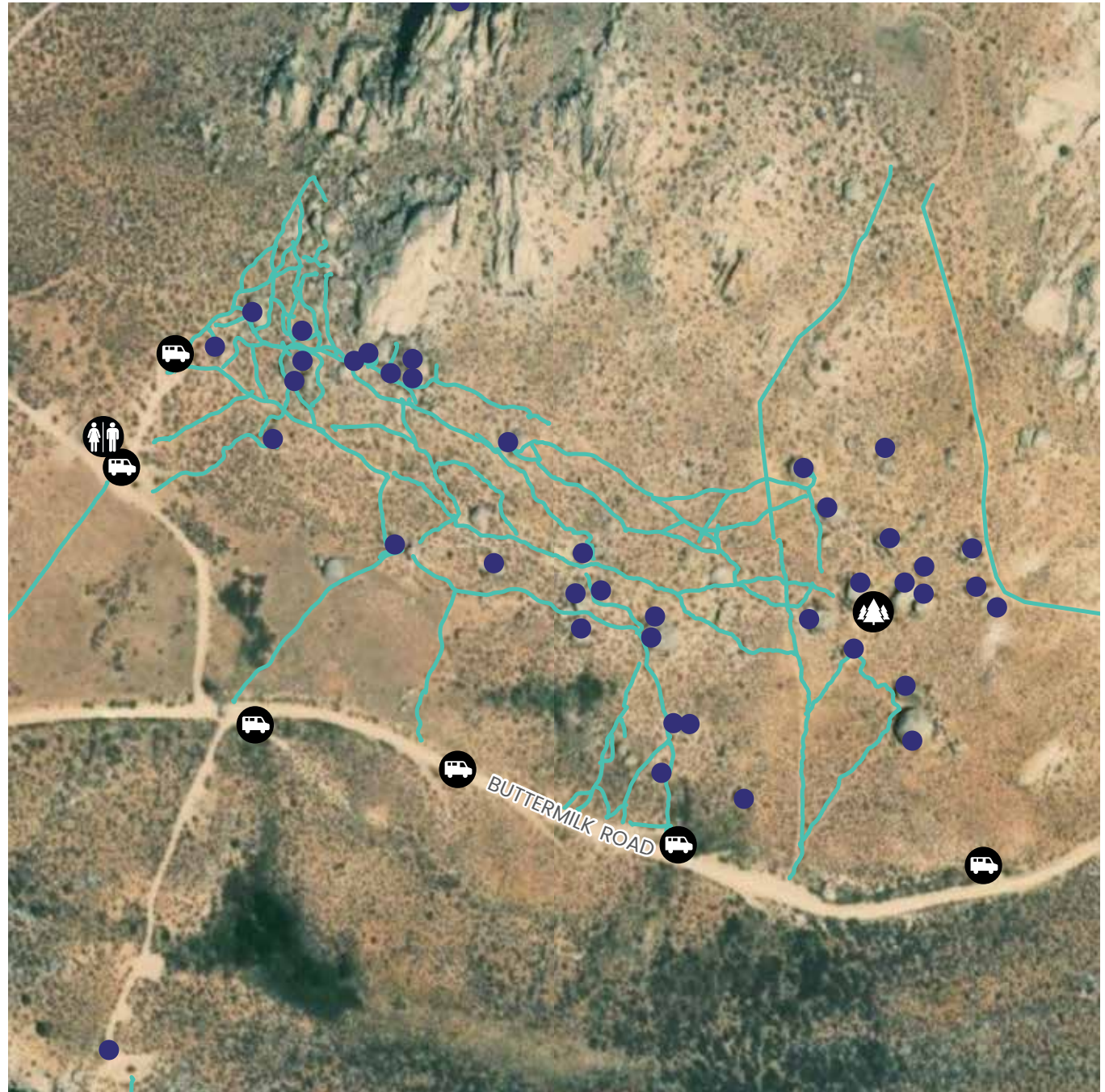


PRIMARY CLIMBING AREA

Legend

-  Boulders
-  Social Trails
-  Climbing Area
-  Popular Parking Area
-  Existing Toilet

All of this land is managed by the USFS. Buttermilk Road is currently maintained by Inyo County.



alta

0 0.03 0.05 MILES



Land Management

Multiple jurisdictions manage land within the BIRPI Project Area. These jurisdictions have differing policies and restrictions and there is no existing stewardship group that facilitates regular coordination between managers, making continuity of improvements in the area more difficult.

USFS

The United States Forest Service (USFS) manages the Inyo National Forest. Within the forest most recreational activities like hiking, backpacking, climbing, skiing, and off-roading are allowed. In the Buttermilk Project Area, dispersed camping is allowed on USFS land and campfires are allowed with a free campfire permit. The Buttermilk Project Area is within the USFS White Mountain District and the ranger station is in the City of Bishop.

USFS rangers work to protect the natural environment and those who visit it. Rangers can patrol to prevent fires while forest protection officers (FPO) can cite visitors and address trespassing. Rangers and FPOs cannot engage in conflict or hostile environments; only law enforcement can respond to public safety issues. In addition to paid ranger positions, the USFS also has volunteer ranger positions. Volunteers can serve in a variety of roles, including as wilderness, OHV, and mountain bike trail patrols and visitor and campground hosts. Currently, through a partnership with the Eastern Sierra Interpretive Association (ESIA), there are two full-time climbing rangers that work seasonally throughout the BIRPI Project Area.

The USFS has concerns about damage to the natural environment and resources, including near popular climbing locations. Crash pads tend to damage vegetation and increase erosion, and large climbing groups increase the potential for larger scale damage. The USFS recognizes the need for improvements in the Buttermilk Project Area, including the need for parking areas, better maintained roadways, and formalized trails. However, implementing these improvements is time and resource intensive and often requires lengthy California National Environmental Policy Act (NEPA) analysis.

USFS RECREATION OPPORTUNITY SPECTRUM

The USFS uses the recreation opportunity spectrum (ROS) to classify and manage recreation opportunities in different settings.

There are six classes on the spectrum:

- Primitive
- Semi-Primitive Non-Motorized
- Semi-Primitive Motorized
- Roaded Natural
- Rural
- Urban

Buttermilk Country is within the **Roaded Natural** class, meaning the area is within 1/2 mile or less from roads and trails open to motorized use. On-site controls are noticeable, but harmonious with the natural environment. Any modifications to Buttermilk Country based on this document should follow the guidelines for this class.

BLM

The Bureau of Land Management (BLM) manages the northern section of the BIRPI Project Area including Tungsten Hills, just outside of the Buttermilk Project Area. Like USFS land, BLM land allows most recreational activities including dispersed camping. Campfires are allowed with a free campfire permit. There is a campground in the BIRPI Project Area on BLM land at Horton Creek Campground. The campground has fire pits and potable water.

Rangers on BLM land educate visitors about the land and recreating responsibly while law enforcement rangers patrol the land and investigate crime.

LADWP

The Los Angeles Department of Water and Power (LADWP) manages land in pockets of the Inyo National Forest, including much of the Buttermilk Project Area. Low impact recreational day use is allowed on LADWP land. Camping and fires in the Buttermilk Project Area on LADWP land are not allowed. Off-road vehicles may only use existing roads and trails on LADWP land. These regulations demonstrate the differing management requirements between

jurisdictions. Additionally, unlike USFS and BLM, LADWP does not have a law enforcement agency to patrol its land.

CDFW

The California Department of Fish and Wildlife (CDFW) manages 325 acres of land approximately two miles south of the Buttermilk Project Area. This wildlife area is popular for recreating and is an important habitat for the migration of the Round Valley deer herd. Camping is not allowed on this land.

The CDFW manages wildlife officers that provide the public with hunting and fishing information and education.



Signage at the border of LADWP land and USFS land.

INYO COUNTY

The Buttermilk Project Area is within Inyo County. The County maintains Buttermilk Road under a 5-year management agreement with the USFS. In the future, there is a possibility this may become a longer term management agreement.

ESIA

The Eastern Sierra Interpretive Association (ESIA) is a 501(c)3 non-profit foundation and designated interpretive organization for the Inyo National Forest that educates the public about the Sierra Nevada and Great Basin lands through interpretive products, exhibits, and programs.

ESIA has mapped trails and identified challenges and opportunities in the Buttermilk Project Area on behalf of the USFS. ESIA encourages stewardship on public lands, and has funded guides, brochures, signs, and facility improvements for the Inyo National Forest. ESIA also funds the two climbing rangers in the BIRPI Project Area.

Climbing Rangers

The two climbing rangers are funded and managed through a collaborative agreement between the USFS, LADWP, Inyo County and ESIA. The rangers operate throughout the entire BIRPI Project Area and educate visitors about the Eastern Sierra's unique ecology and how to protect the land while recreating. This education includes coordination with local climbing groups, schools, and gyms to share recreational ethics and plan stewardship events. The climbing rangers also work to restore the land by delineating trails and parking and camping areas.



CLIMBING RANGER FEEDBACK

As a part of this Initiative, the two climbing rangers, hired through support from ESIA, were consulted and asked to provide their input on the biggest challenges facing the Buttermilk Project Area.

In addition to challenges related to trail delineation and a lack of public education as described later in this document, the climbing rangers also described challenges in coordinating between the land management agencies. The rangers have noted difficulties with obtaining guidance on which trails, camping areas, and parking areas should be delineated depending on the agency. It has also been challenging for the rangers to schedule stewardship events on USFS land and to implement education programming due to the cultural significance of the area.

User Groups

Different user groups have affected the Buttermilk Project Area's landscape in distinct ways. The materials and equipment these groups use have damaged vegetation and affected wildlife habitats. Without policies and infrastructure in place to manage these user groups, the damage to the land will continue as the number of visitors to the area increases.

The Inyo National Forest is a mixed-use forest with multiple recreational opportunities. Despite challenges between user groups, it is important to the USFS that access to the forest remain available for all allowed recreational users.

CLIMBING

Climbing has become extremely popular in the Buttermilk Project Area, especially at the Buttermilk Boulders. The Buttermilk Boulders attract climbers from all over the world and are famous for their highball boulders and difficult boulder problems. Climbers are typically aware of leave no trace principles, however; even experienced climbers may not be

familiar with the unique and delicate ecosystem of the Eastern Sierra. The number of climbers visiting the space each year has damaged the environment, particularly from creating trails to reach the boulder areas, and crushing vegetation with crash pads. Additionally, bouldering, especially at night, creates noise and light that impacts wildlife. Local organizations work to educate climbers, protect and conserve the land and strengthen bonds between climbers and community members.

OHV USERS

Off-road vehicles (OHVs), like dirt bikes, are popular to ride in the Buttermilk Project Area. These OHVs leave tracks in the ground, and damage vegetation and soil when driven off established roads and trails. Perhaps due to a lack of education or a lack of enforcement in the area, some OHV users have ridden in sensitive areas destroying wildlife habitats and widening waterways.

BISHOP AREA CLIMBER'S COALITION

The Bishop Area Climber's Coalition (BACC) goals are to strengthen the bonds between climbers and non-climbers, maintain and conserve Bishop's landscape, and educate climbers on using public spaces. Key feedback received from interviews with the BACC for this Initiative include:

- ♦ Accessing the popular climbing locations in Buttermilk Country is even more difficult in the winter, when the area is popular with visitors. The BACC is in support for delineating trails through the Buttermilk Project Area and improving access to it.
- ♦ The Peabody Boulders are some of the most popular in the Buttermilk Country for climbers. The BACC is in support of wayfinding and other strategies to encourage non-climbers to park and camp away from the Peabody Boulders in order to spread out the concentration of visitors in one area.

OTHER USERS

While climbers and OHV users have caused measurable environmental damage, visitors of all types have played a role in affecting the land, and are continually responsible for helping to protect the land.

Other popular recreational opportunities in the Buttermilk Project Area are hiking, fishing, hunting, horseback riding, trail running, photography, painting, and wildlife viewing. South of the Buttermilk Project Area is the Horton Lakes Trailhead which can be used by hikers and leads to Horton Lake which can be used for fishing. Hikers and fishers can also visit the Upper Buttermilk Trail which leads to Longley Lake. Within CDFW's Buttermilk Country Wildlife Area south of the Buttermilk Project Area visitors can hunt deer, quail, and blue grouse. During the winter, back country skiing, snowshoeing and sledding are popular in both the Buttermilk Project Area and the Pine Creek area. There are also ongoing active cattle grazing leases

west of the Buttermilk Project Area. For each of these activities visitors are responsible for following leave no trace principles like staying on trails, keeping dogs on a leash and collecting all trash and waste before leaving. All visitors also need to use Buttermilk Road to access recreational areas beyond the Buttermilk Project Area which contributes to road damage.

While there are many uses in the BIRPI Project Area, it became clear during the public engagement process that the Buttermilk Project Area was the highest priority to the public. While many of the potential alternatives and solutions presented in this Initiative document can affect all visitors, this document is focused on alternatives that will most affect the visitors that visit the primary climbing area and park and camp in the surrounding area.



Climbing festivals like the Craggin' Classic and Flash Foxy can see hundreds of visitors in the Buttermilk Project Area in one weekend.

RATES OF USE

The use of the Buttermilk Project Area varies widely throughout the year. Peak usage of the climbing area is typically in the winter, with summer months being the off-season. Eastern Kentucky University, in partnership with the Bishop Climbing Coalition, created an average visitation estimate per day throughout the year based on counts done by their project team¹. As seen in Table 1, the Buttermilk climbing area receives most visitors at the beginning and end of the year. This table also shows the popularity of the Buttermilk Project Area compared to the Happy/Sad Boulders. This estimate may be used to determine scale and capacity in future planning programs. This estimate can also be used to compare future counts to determine how the number of visitors has changed since 2019, since climbing as a sport has greatly increased in popularity in the years since.

¹ Maples, James N, Michael J Bradley, Mary Boujaoude, Mora Rehm, and Tim Golden. *Economic Impact of Rock Climbers in Bishop, California*.

Table 1. Average Number of Cars per day in Parking Areas by Month, January 2019–March 2020

MONTH	HAPPY BOULDERS	UPPER SAD BOULDERS	LOWER SAD BOULDERS	BUTTERMILK BOULDERS
JANUARY	70	6	20	90
FEBRUARY	66	6	19	85
MARCH	64	5	18	82
APRIL	23	2	7	29
MAY	11	1	3	15
JUNE	3	0	1	4
JULY	3	0	1	3
AUGUST	3	0	1	3
SEPTEMBER	8	1	2	10
OCTOBER	18	2	5	23
NOVEMBER	49	4	14	63
DECEMBER	61	5	17	78

Paiute Tribal Involvement

The Owens Valley Paiute are descendants of the Nüümü people, the original people of the Owens Valley. While the Paiute do not directly manage any of the land in the BIRPI Project Area, the area is rich with tribal history, and their cultural perspective is invaluable in developing recreation and management standards. Local tribe representatives were consulted for this Initiative. Detailed feedback can be found in Appendix D.

The site of the Buttermilk Boulders has traditionally been a site for Paiute wedding ceremonies, however the increase in climbers has made it difficult for the Paiute people to find suitable times to visit the boulders for ceremonies. In other places in the Eastern Sierra such as the Tablelands, another popular climbing area, visitors have damaged vegetation and ruined habitats for animals the Paiute tribe have traditionally hunted. Too many visitors also threaten the condition of the thousands year old petroglyphs in the Tablelands.

In addition to causing physical damage to the environment, visitors to the Buttermilk Project Area can also create disruptions through noise. Many of the recreational activity options in the Buttermilk Project Area require an acceptance of risk. Climbing in particular can lead to serious injury and death. These types of accidents can affect the spiritual energy of the site. These non-physical influences cause a degradation of the environment for Paiute Tribe members to enjoy the boulders.

Some tribal members are interested in encouraging climbing, particularly for tribal youth, as a way for them to connect to the land. The USFS has expressed interest in partnering with the tribe to add a tribal climbing ranger to the existing climbing ranger program. These rangers could provide context for climbers about respecting cultural areas and only climbing in established areas to not disturb cultural sites.

Future decisions related to changes in this landscape should involve early and frequent communication with tribal representatives.

RECREATING RESPONSIBLY

The Bishop Paiute Tribe has created a [guide](#) for recreating responsibly on the lands of the Nüümü and Newe peoples. The guide encourages visitors to learn about the history of the land, including an understanding of why visitors should not enter or move anything from cultural sites. This guide serves as an example of why tribal collaboration is vital in mitigating visitor impacts to the area.



Signage has been placed at some bouldering areas in the Eastern Sierra prohibiting climbing.

Initiative Process

This document is the beginning of a larger process to identify the most effective solutions to address the challenges in the BIRPI Project Area. This document captures community input and preferences for land management agencies to consider and reference when making improvements and developing a management plan. As shown in Figure 5, this document summarizes feedback from the community, the Paiute Tribe, and stakeholder agencies.

The next step for developing a management plan and implementing changes in the Buttermilk Project Area are for the land owner agencies to collaborate and reach a consensus on the appropriate alternatives for each challenge presented in this document, many of which may be combined together.

Then, the agencies will need to determine the capacity that each agency has in completing necessary studies like CEQA and NEPA for the chosen alternatives. These studies will require further participation from the public and from the Paiute Tribe. Additional studies will likely need to be completed, including for cultural resources, visual impact, noise, hydrology/soils, botany, and biological resources, all of which will influence final decisions and outcomes for the Project Area. Some potential alternatives presented in this document, like developing paved parking lots or developed campsites may be deemed impossible after these environmental studies are complete. A biological constraints analysis has already been completed as a part of this document in the BIRPI Project Area, shown in Appendix C.

Land owner agencies should also collaborate to determine capacity for enforcing regulations for the Buttermilk Project Area. Later, implementation of solutions can be completed with additional studies and the identification of programming for the area.

Figure 5. Initiative Process





Stakeholder Feedback

Stakeholder Feedback

Stakeholders have different concerns about the impact of the increased recreation in the Buttermilk Project Area and differing opinions on the best way to keep the area protected and usable for future generations. There is a palpable interest in the Buttermilk Project Area from many different stakeholders and groups and there are commonalities regarding challenges and some mitigation strategies. However, there are also a spectrum of opinions on potential solutions. The following section describes how stakeholder feedback was collected and used in this Initiative document.

DIFFERING PRIORITIES

The three main land managers, USFS, BLM, and LADWP have different regulations for recreation, parking, and camping on their land, although this information is not always clear to visitors. These agencies want to mitigate environmental impacts to the land while offering safe recreational opportunities for all visitors.

Residents of Bishop, including those in the neighborhood of Starlite and the Bishop Paiute Tribe, have concerns about the increased traffic, camping, waste, impacts to vegetation and wildlife, and threats of wildfire that more visitors bring to the Buttermilk Project Area. The Buttermilk Project Area has cultural and historical significance and residents want to preserve the area in its broadest geography for future generations.

Visitors to the Buttermilk Project Area want to experience the well-known recreational opportunities, including world class climbing, trail running and hiking, off-roading, hunting, fishing, and winter sports. Visitors want these recreational areas to remain accessible, though there are differing opinions on the number of amenities that should be available to visitors.



Visitors world-wide come to the Buttermilk Project Area to experience its numerous recreational opportunities.

Public Engagement

Feedback from the community was the primary contributor to the outcomes in this Initiative. Resident and visitor feedback helped in understanding how the Buttermilk Project Area is used and where there are deficiencies in management. Public feedback was used to identify the top concerns regarding the Buttermilk Project Area and to gauge which types of improvements would be most welcomed by the public.

PUBLIC INPUT MAP

The project team utilized a public input map to solicit feedback from the community to determine where and what the major concerns are within the entire BIRPI Project Area. The input map was available online via the Eastern Sierra Council of Governments website between the end of July to mid-September 2023. Participants could use the public input map to provide feedback on any aspect of the BIRPI Project Area including parking, camping, trails, amenities, and what they would like to see changed or remain the same. Participants also could select the primary reasons why they visit the BIRPI Project Area. The map received 280 comments from 40 community members. Figure 6

shows where each comment was left. Most comments were placed in Buttermilk Country, which shaped the focused Buttermilk Project Area. Overall, comments were less focused on the bouldering area in Buttermilk Country, and mostly related to the state of Buttermilk Road and concerns about fires and impacts associated with dispersed camping, such as vegetation degradation.

PUBLIC WORKSHOPS

Workshop #1

Three public workshops were hosted as a part of this Initiative. The first workshop was hosted online in September 2023 and was open to all interested community members. Approximately 60 community members attended this workshop. The workshop reviewed the project, and engaged participants in collaborative exercises so everyone could understand where there are commonalities and divergences in opinions.

For many stakeholders, sustainable impact to the environment is a crucial issue to address. Participants want

visitors to be educated about using the recreation area, and to see land owner agencies encourage visitor education and stewardship.

There was also a consensus on the need for more accessibility to the Buttermilk Project Area and more amenities for visitors to prevent waste and damage to the natural environment. This could include signage to preferred paths, parking spaces and campgrounds.

Some community members were in favor of stronger enforcement methods to protect the land, such as banning all campfires, banning harmful climbing equipment like liquid chalk, and limiting visitor numbers through a permit or fee entry system. Climbing rangers and tribal rangers could be used to lead the enforcement programs.

Attendees also voiced concerns about a variety of other issues including dogs, night time climbing, liquid chalk, the prevalence of drones, and dust from the road.

Responses from the Public Input Map and Workshop #1 were used to determine the key issues that are

Figure 6. BIRPI Public Input Map Themes



BIRPI PROJECT AREA

Public Input Map Themes

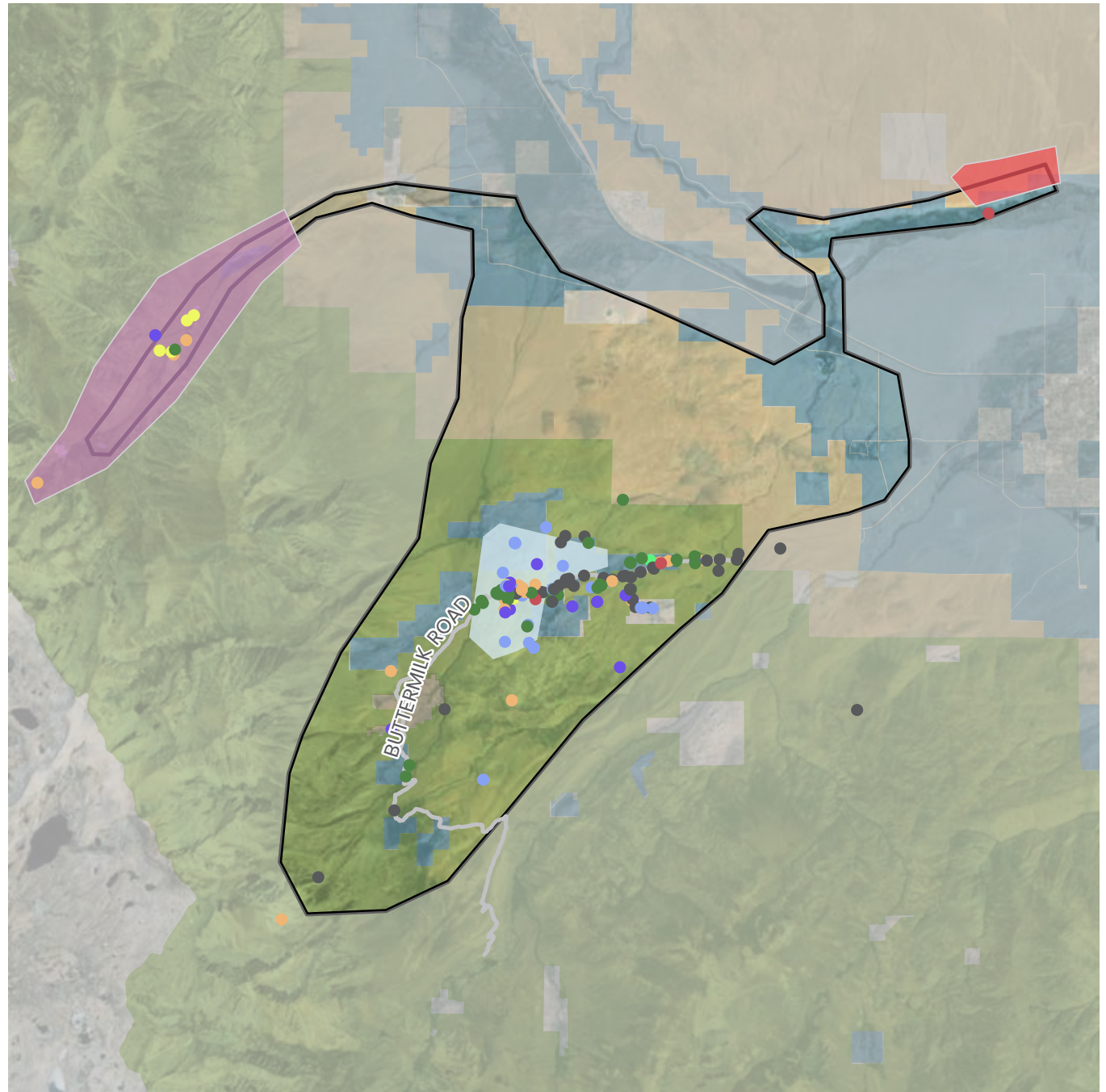
- Camping/ Fire Concerns
- Climbing
- Crowding
- Damage to Environment
- Maintenance/ Infrastructure Improvement
- Parking
- Popular Destination
- Restroom
- Roadways
- Trash

Boundaries

- ▭ BIRPI Project Area
- ▭ Buttermilk Country
- ▭ Happy and Sad Boulders
- ▭ Pine Creek Canyon

Primary Land Managers

- ▭ BLM
- ▭ LADWP
- ▭ USFS
- ▭ C.A. Fish and Wildlife



facing the Buttermilk Project Area. While opinions differed on how to solve these issues, there was consensus that these were the most important issues that this Initiative document should address. The team created twelve categories based on the public comments:

- ◆ Buttermilk Road
- ◆ Camping
- ◆ Climbing Rangers
- ◆ Management
- ◆ Education
- ◆ Habitat Destruction
- ◆ Maintenance
- ◆ Overcrowding
- ◆ Parking
- ◆ Trails
- ◆ Tribal Involvement
- ◆ Wildfire

Workshop #2

A second workshop was held in-person in the city of Bishop on November 3, 2023. Approximately 60 community members attended this workshop. This workshop presented the twelve categories of key issues and preliminary solutions. Community members were asked to choose which solutions they preferred, and which categories were most important to



During Workshop #1 participants wrote down their vision for improving the Buttermilk Project Area.

them. Community members could also provide general feedback on any element that the project team may have missed.

While not every alternative was mutually exclusive, solutions for each category were presented on a scale of “Quick /Easy” to “Achievable/Implementable” to “Long Term/Big Vision”. However, through the course of the workshop it became clear that these level of effort descriptions were not accurate for each potential solution. These level of effort categories were removed in the final Initiative document.

After the workshop, the project team reviewed the written comments of each workshop participant. Any interested member of the public that was unable to attend the workshop was also encouraged to send in electronic comments, which the project team also reviewed. Based on the sentiment of each potential solution, the project team gave the solution a value of either +1 or -1. This metric provided a quantitative analysis of the input to help judge the popularity of each solution. The results of analysis can be found in Chapter 3, and in more detail in Appendix B. Additionally, this workshop showed that identifying specific recommendations

GOAL
Reduce the amount of waste left behind from visitors and maintain facilities within the project area such as trails, fencing, and toilets.

POTENTIAL SOLUTIONS

Quick/Easy: **Yes!**
Regular volunteer clean -up days

Achievable/Implementable:
Educational signage and programming, hire a law enforcement ranger \$\$\$

Long Term/Big Vision:
Install additional trash facilities and hire permanent staff to maintain facilities, restrooms, campgrounds, and trails. Hire additional law enforcement rangers as needed

Yes!

GOAL
Create a maintenance plan and implement permanent road improvements

POTENTIAL SOLUTIONS

Quick/Easy:
Seasonal maintenance plan

Achievable/Implementable:
Shuttle service from Bishop
Drainages/culverts to prevent wash outs
Long Term/Big Vision: and require less maintenance
Pave Buttermilk Road and create a northern road route

↳ pave only to the boulders
to allow for OHV recreation
beyond the boulders

During Workshop #2 participants provided their feedback on potential solutions.

Circle the solution you prefer in each recommendation category then, rank your top three categories in order of importance.

Recommendation Category	Quick/Easy	Achievable/Implementable	Long Term/Big Vision
<input type="radio"/> Buttermilk Road	Seasonal maintenance plan	Shuttle service from Bishop	Pave Buttermilk Road and create a northern road route
<input type="radio"/> Camping	Camping permits and camping areas	Formalize campsites	Developed campsites with facilities
<input checked="" type="radio"/> Climbing Rangers	Organize volunteers to assist rangers	Create a small welcome center and hire a law enforcement ranger	Hire several full-time patrolling rangers
<input type="radio"/> Collaboration	Create an online comment box	Join an existing organization's committee meetings	Create an organizational body
<input checked="" type="radio"/> Education	Signage, brochures and online educational campaigns	Required permit and education for all visitors	A more robust signage system and online resources
<input checked="" type="radio"/> Habitat Destruction	Ban OHVs in sensitive areas	Use physical infrastructure to show recreational users where they should use OHVs, set up crash pads, camp and park	Create an OHV trail network and expand climbing ranger program to educate visitors

What recreational activities other than climbing do you see in the BIRPI project area? What other recreational activities would you like to do in the project area that are difficult now?

Birding, hiking, running, photography, wildlife observation, wildflower observation, quiet contemplation of beautiful spaces

During Workshop #2 participants chose their preferred solutions and identified the categories most important to them. The top three categories chosen by the public are shown in Chapter 3.

for implementation in this Initiative document is premature, as there is not currently a stewardship group that can implement area-wide changes. Instead, as shown in Chapter 3, the potential solutions were refined, and described as alternatives rather than solutions.

Workshop #3

Workshop 3 was hosted on December 14 2023. Approximately 50 community members attended this workshop. This final workshop reviewed the twelve categories and summarized the feedback received on each of the alternatives for each category. As described in Chapter 4, certain items can be implemented relatively quickly without the need for a single management body. These items include:

- ◆ Expansion of the climbing ranger program
- ◆ Install welcome kiosk
- ◆ Increased tribal consultation
- ◆ Establish and improve baseline data and data management
- ◆ Implementation of climbing regulations
- ◆ Installation of educational signage
- ◆ Delineation and consolidation of social trails

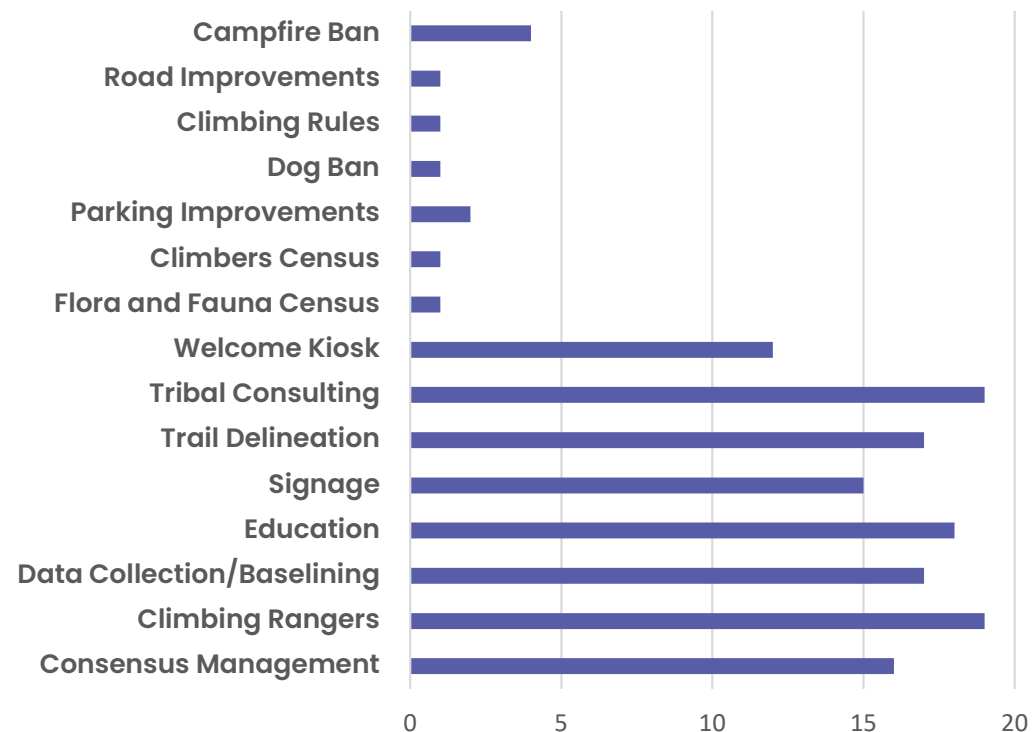
Stakeholders were asked to weigh in on these action items and identify items that were most important to them. Community members were also asked to collaborate to determine a final vision for the Buttermilk Project Area.

Based on feedback from the workshop, tribal consulting and expansion of the climbing ranger program were the highest priority alternatives. However, many of the presented alternatives were popular and met

with enthusiasm. There were concerns about the prevalence of a signage campaign and a welcome kiosk on the aesthetics of the landscape, with preference to a more targeted and specific campaign.

There were also suggestions of an immediate moratorium on critical issues, such as campfires, since the planning process and necessary facilities will take some time to be implemented.

Recommended Next Steps



During Workshop #3 community members chose the recommended next steps that are most important to them.



Approaches to Area Challenges

Approaches to Area Challenges

Through the public engagement process it became clear that there was consensus on what are the biggest challenges in the Buttermilk Project Area. However, there was not consensus on how to address these challenges, nor is there an organizational body in place to make decisions for the entire Buttermilk Project Area. The intent of this chapter is to present a suite of options for each category and to ensure all parties and agencies engaged in this planning process are heard.

CATEGORIES

The following section has twelve categories that represent the challenges of the Buttermilk Project Area. Each category includes a description of the challenge and the ideal goal in addressing each challenge. Each category also has a no action consequence. These are the consequences that will occur if no decisions are made in the Buttermilk Project Area and if the land owning agencies do not collaborate on solutions.

Many of these categories are interrelated and addressing the challenges in one category may help address another. For example, formalizing camping may also result in better control of campfires. Similarly, implementing strategies to control overcrowding can help prevent further habitat destruction.

In workshop #2 community members were asked to choose the categories that were most important to them. The top three categories chosen were camping, education, and parking.

SUITE OF ALTERNATIVES

Each category includes a suite of alternatives that could be used to reach the goal of the category. These are high-level concepts that were created through collaboration with the community and area stakeholders.

Graphs and quotes describe the community feedback on each alternative, whether positive or negative. While public engagement was key in the formation of these alternatives, so was input from the USFS. As noted throughout the chapter, the USFS deemed some alternatives infeasible or in contrast to agency guidelines.

These alternatives are the starting point for further consultation with the land management agencies in the Buttermilk Project Area, including the USFS. Any decisions and final approvals on these alternatives would be made by these agencies.

In some cases, alternatives have low resistance among stakeholders and can potentially be implemented quickly and cost effectively to help provide immediate solutions to the Project Area.

Shared Management

The lack of a single oversight committee or decision making body encumbers solution implementation to provide facilities and maintain the area. A body should be created at the level of jurisdictional authorities and be made up of relevant stakeholders and agencies including the Nüümü people/ Owens Valley Paiute, land management agencies such as USFS, LADWP, BLM, and the Inyo County Supervisors. This management body will improve communication channels between the managing agencies and local stakeholders including with groups like the Bishop Climbers Coalition, Valley Outdoors, the Starlite Community Service District, and other local communities. A centralized body will help facilitate decision making, conduct outreach, and manage the land.

The Buttermilk Project Area should be run by an organization with the authority to enforce rules, work with regional stakeholders, administer permits (if appropriate), raise funds, and implement long term planning efforts. For any long term changes to occur within this area, agreements with USFS, LADWP, BLM and CDFW need to be reached to allow for construction of facilities and implementation of services on their land. The construction of facilities and services will invoke the CEQA and NEPA processes, so partners with the authority to evaluate these programs must be involved. Collaboration between these organizations should also include the sharing of resources like vehicles and equipment, staffing capacity and funding. The management body will be able to make decisions moving forward ensuring that all proper parties are represented in the

process, whether this is an existing organization facilitating the planning process or a new organization created out of stakeholder partnerships. Smaller decisions and actions, like those that volunteer groups already perform, will continue, but if a larger body is organized, there will be a stronger ability to receive funding, land manager support, and buy-in from diverse stakeholder and public desires.



Management

The Buttermilk Project Area includes multiple jurisdictions with interrelated recreation uses and impacts.

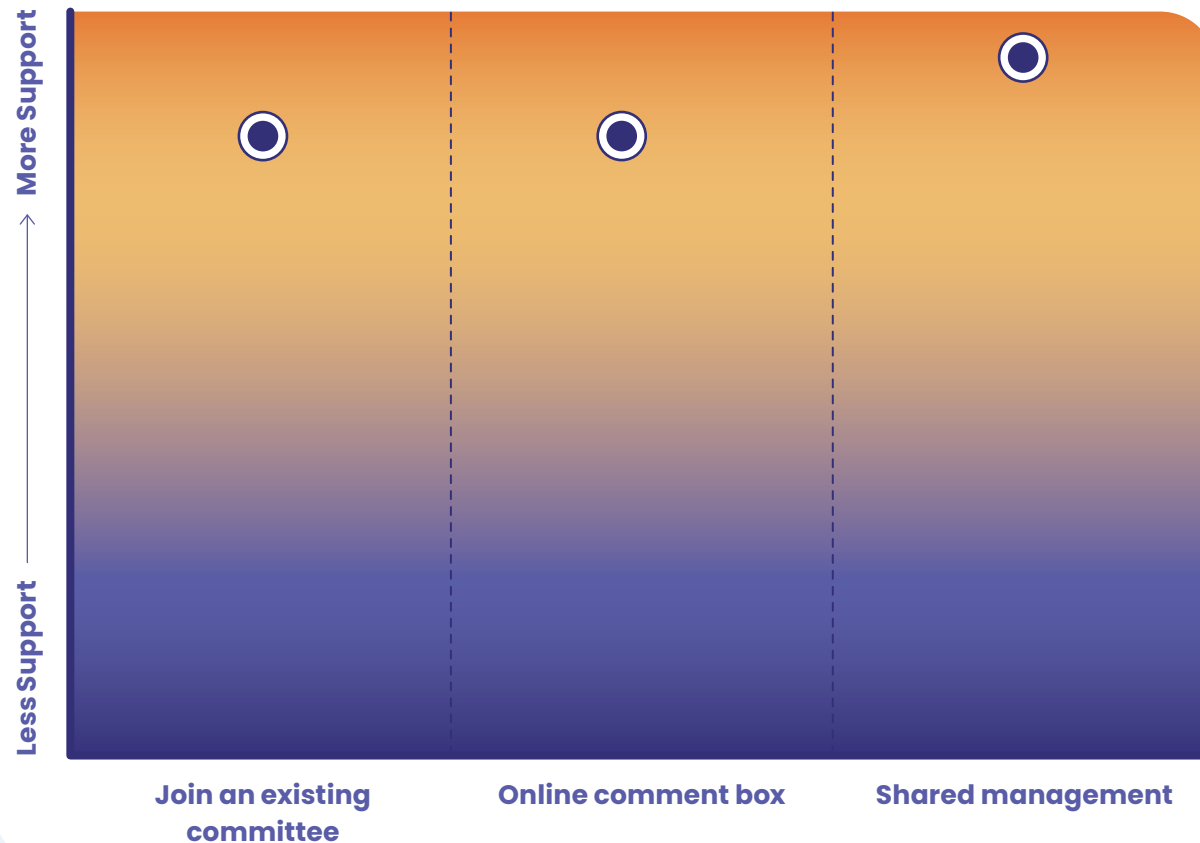
However, no single entity or central organization body has responsibility for management or implementation.

The Buttermilk Project Area lacks the capacity for the coordinated and consensus management of the landscape by the relevant land management agencies. Instead, the area is managed by multiple agencies with differing capabilities, responsibilities, management policies and organization mandates, currently attempting to manage complex and interrelated recreation uses and impacts.

While the other alternatives in this chapter are early concepts, the creation of an organizational body or stewardship group to take care of the Buttermilk Project Area is strongly recommended. This group should be created by and include the land management agencies (USFS, LADWP, BLM, CDFW), Inyo County Supervisors for constituent representation, and the Nüümü people/ Owens Valley Paiute. Without the creation of this group, it is unlikely that any other challenges in the Buttermilk Project Area can be addressed in the near term.

GOAL	ALTERNATIVES
<p>Create a collaborative agreement between land management agencies to discuss challenges and opportunities within the Buttermilk Project Area, implement complimentary practices that are in line with agency existing guidelines, standards, and protocols, and provide opportunities in the Buttermilk Project Area.</p>	<p>Join an existing committee Land managers join an existing organization's committee meetings, such as the ESSRP, to regularly discuss the Buttermilk Project Area.</p> <p>Online comment box Create an online comment box for all visitors and community members to leave their thoughts on the Buttermilk Project Area.</p>
<p>NO ACTION CONSEQUENCE</p>	<p><i>*Not preferred by USFS</i></p>
<p>Alternatives or next steps identified in this Initiative are likely contingent on the shared stewardship, continuity, and organization of all landowners and jurisdictions. Without this continuity in management, it is too difficult for several jurisdictions in the Buttermilk Project Area to thoughtfully deal with the issues.</p>	<p>Shared management Create an organizational body, like a "Friends of" group, to discuss the Buttermilk Project Area and make decisions. This body should include all landowners, jurisdictions and stakeholder organizations, and potentially community representatives and local businesses. This group should be responsible for stewardship and transparency in the area.</p>

"I understand that there are discrepancies between the Forest Service's demands and the county's abilities, but those agencies need to sit down and come up with a solution" - Public comment

Table 2. Management Public Support**SUMMARY OF RESULTS**

- Alternatives were presented to participants, but without the creation of an organizational body, few of the other alternatives are feasible. **Creating this organizational body will simplify the process of implementing the suggestions in this Initiative and will increase the likelihood of consensus between land managers.**
- Although the online comment box and joining an existing committee received fewer total positive comments from participants, none of the presented alternatives received negative comments.

"Consensus is hard when fragmented across multiple independent groups. A single organizational 'board' with participation from all stakeholders speaking as a unified voice would be much more effective in advocacy to USFS."

"[...] an oversight committee must include representatives from all communities, including local Nüümü and Newe and environmental communities, not just from recreational groups and people from extractive industries."

SPECIAL DESIGNATIONS

- The final chosen collaborative body may choose to pursue special designation for the Buttermilk Project Area. Special designations can help position the Project Area for dedicated funding and resources to protect the natural environment. See the Alabama Hills Management Plan case study on page 95 for an example of a designated National Scenic Area.



Without an organizational body or stewardship network, the existing challenges in the Buttermilk Project Area will continue.

Buttermilk Road

Buttermilk Road is the main road providing access to Buttermilk Country. The road also provides access to Horton Creek. Most traffic occurs from October to April, with less traffic occurring from May to September, when most visitors are accessing the Horton Lakes Trailhead. Visitors traverse the road by car, off-highway vehicle (OHV), foot, bicycle, and horse. Visitors driving to Buttermilk Country mainly park on the shoulder of the road between the Peabody and Birthday Boulders.

The road is unpaved and requires seasonal maintenance due to heavy visitor usage. In the absence of severe weather impacts, the speed and care with which drivers navigate Buttermilk Road is the largest contributor to road degradation. Two wheel drive vehicles driving too fast exacerbate many of the current issues on the road such as creating washboards (perpendicular ridges in the dirt roadbed which can damage cars), kicking up dust, furthering erosion, and redirecting runoff. Precipitation and snow melt from nearby mountains can also cause damage, requiring closures of the road. Due to roadway damage, drivers sometimes choose to take environmentally destructive alternative routes or to cut-through the Starlite neighborhood.

GOAL

Create an improved maintenance plan, implement permanent road improvements and minimize impact to the road by users.

NO ACTION CONSEQUENCE

The maintenance agreement between INF and Inyo County will continue in its current form. Roadway damage will prevent visitors from accessing the space, especially for visitors without 4x4 capabilities. Drivers will drive off-road on sensitive areas to avoid the road damage, and emergency vehicles will be unable to access the boulders.

POTENTIAL ALTERNATIVES

Consistent grading/drainage/dust management

Regrade the road with appropriate drainage and implement dust suppressant strategies.

Maintenance plan

Create a maintenance plan to prepare for future funding opportunities, but do not make significant infrastructure improvements. The plan should identify mitigations for dust and road base stability beyond paving and identify key drainage issues.

Northern route*

Implement a northern road route to be used as an alternative to Buttermilk Road.

**Deemed infeasible by USFS*

Paved road*

Pave Buttermilk Road.

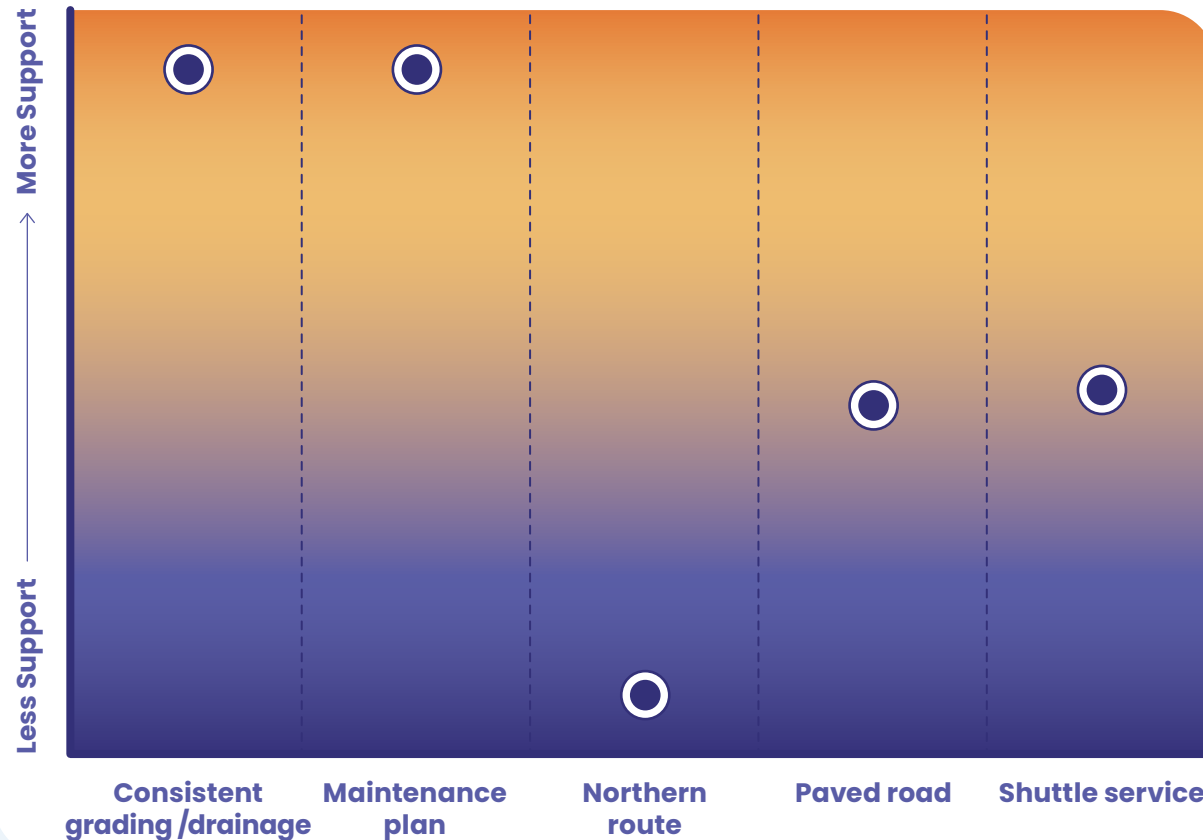
**Deemed infeasible by USFS*

Shuttle service**

Implement a regular or seasonal shuttle service from Bishop.

***This is a relatively low resistance alternative that can be quickly implemented.*

"Buttermilk Road needs more regular investment to maintain the status of the road to non-4wd vehicles. This road should be paved to the birthday boulders parking lot." - Public comment

Table 3. Buttermilk Road Public Support**SUMMARY OF RESULTS**

- Most participants were in favor of the creation of a more robust maintenance plan. This plan can prepare the future stewardship group for the regular maintenance needs of Buttermilk Road.
- Most participants disagreed with the alternative to construct a northern route to the Buttermilk Boulders.
- Although not an initial alternative presented to community members, many people wrote-in their support for Buttermilk Road to be regraded with appropriate culverts and drainage.
- A shuttle service would be ideal for Stewardship Days or high impact weekends. However, it must be run by Eastern Sierra Transit or a licensed guide/outfitter.

PROS AND CONS OF PAVING BUTTERMILK ROAD

Paving Buttermilk Road was one of the most commented-on alternatives in this process. 57% of respondents are against the paved road while 43% are in support.

"Please don't pave the road! Environmental impacts to water from asphalt, biological impacts from the road, and other impacts from paving would destroy the habitat value for the area. Plus, paving would only increase speeding and traffic problems by an order of magnitude."

"Paving the road could be the best way to facilitate campgrounds and bathrooms. Also reduces dust."

MAINTENANCE PLANS

- Road maintenance plans should include maintenance schedules, analyses of different dust suppressants, analyses of draining and hydrology (such as altered ephemeral washes and streambed courses), and studies of where road maintenance would be most impactful.
- Water can act as a temporary dust suppressant, however other materials like water absorbing chemicals, oils, and additives can better bind together surfaces and prevent dust.
- Identifying areas where maintenance would be most impactful can help mitigate future damage to the road.



Because Buttermilk Road has not been regraded, the existing drainage systems have been made ineffective.

Camping

Top 3

Dispersed camping is allowed on USFS and BLM lands and occurs mainly to the west of the cattle guard along Road 7S01 and 7S01E and east of the cattle guard illegally on LADWP land. Camping is not allowed on LADWP land and has been discouraged at the Birthday Boulders.

Visitors camping in dispersed and informal campsites have added debris, erosion, wildfire risk, and damage to cultural sites in the area. While campers are encouraged to use already disturbed land for camping, overcrowding and a lack of education and enforcement has led to campers setting up in vegetated areas and trampling sensitive plants.

The concentration of dispersed campers along Buttermilk Road impacts available resources and the resulting noise and campfires alarm nearby residents. Campfires are especially a concern during winter months (when camping is very popular) and in spring during high winds.

Future collaboration to manage camping could include development of a formal campground on USFS lands or on LADWP lands managed by Inyo County. In the interim, already disturbed sites can be inventoried and dispersed camping limited to those sites with protocol to restore newly created sites.

GOAL

Reduce impacts to the natural area from camping and plan for the growth of visitors to the area.

NO ACTION CONSEQUENCE

Buttermilk Boulder area campsites will continue to spread and impact culturally sensitive locations and vegetation. As popularity in camping and use rises, areas may see an increase in trash, vehicle debris, human waste, and fires.

POTENTIAL ALTERNATIVES

Camping ban*

Do not allow camping near the Buttermilk Boulders.

**A full camping ban was deemed infeasible by USFS*

Camping permit

Require a camping permit to camp near the Buttermilk Boulders.

Developed campsites

Construct developed campsites with amenities like fire pits, toilets, picnic tables, and staff monitoring the sites.

Primitive campsites

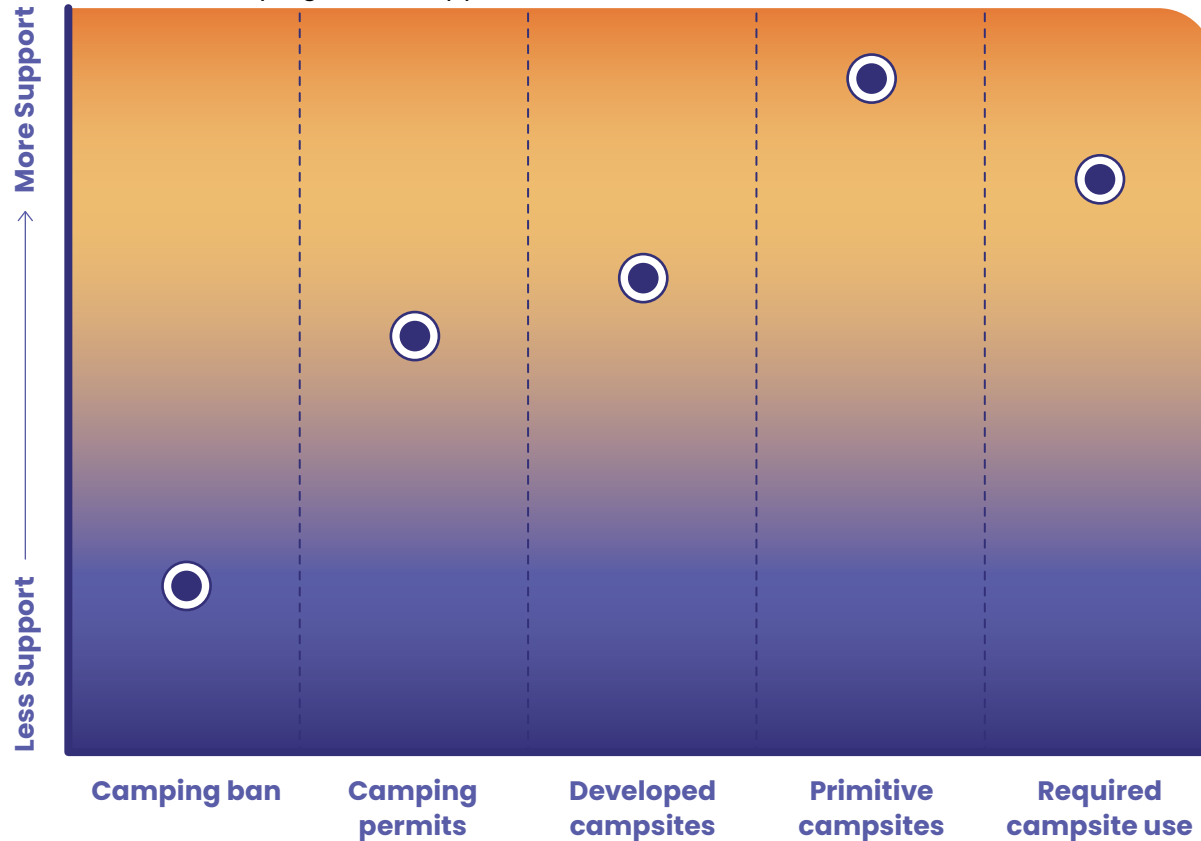
Construct primitive campsites clusters with minimal amenities, but do not concentrate sites in one area.

Require campsite use

Regardless of the type of campsite provided whether primitive or developed, require the use of a campsite and do not allow dispersed camping.

"I would love to see all dispersed camping in the buttermilks and table lands prohibited. We could use monies from actual campgrounds to fund road maintenance, ranger presence, etc. There are simply too many land users and not enough oversight." - Public comment

Table 4. Camping Public Support



SUMMARY OF RESULTS

- Most respondents acknowledged the need for camping areas and a change in the way camping is currently handled. Many respondents were in favor of primitive designated campsites (without facilities).
- A majority of comments were in favor of requiring the use of campsites rather than allowing dispersed camping, and in the long term creating a developed campsite with facilities, which could also be a revenue generator.
- A general camping ban was the most disliked alternative with most respondents against the idea. The USFS has also deemed this alternative infeasible as the agency will not ban any recreational users from enjoying the Inyo National Forest.

"Consensus is hard when fragmented across multiple independent groups. A single organizational 'board' with participation from all stakeholders speaking as a unified voice would be much more effective in advocacy to USFS."

"Would like to see a full blown campground in the future. Bring in revenue to help with maintenance and will help with wildlife safety"

"Will need to move towards only designated camping in the future"

"I'd prioritize designated camping areas with permits required."



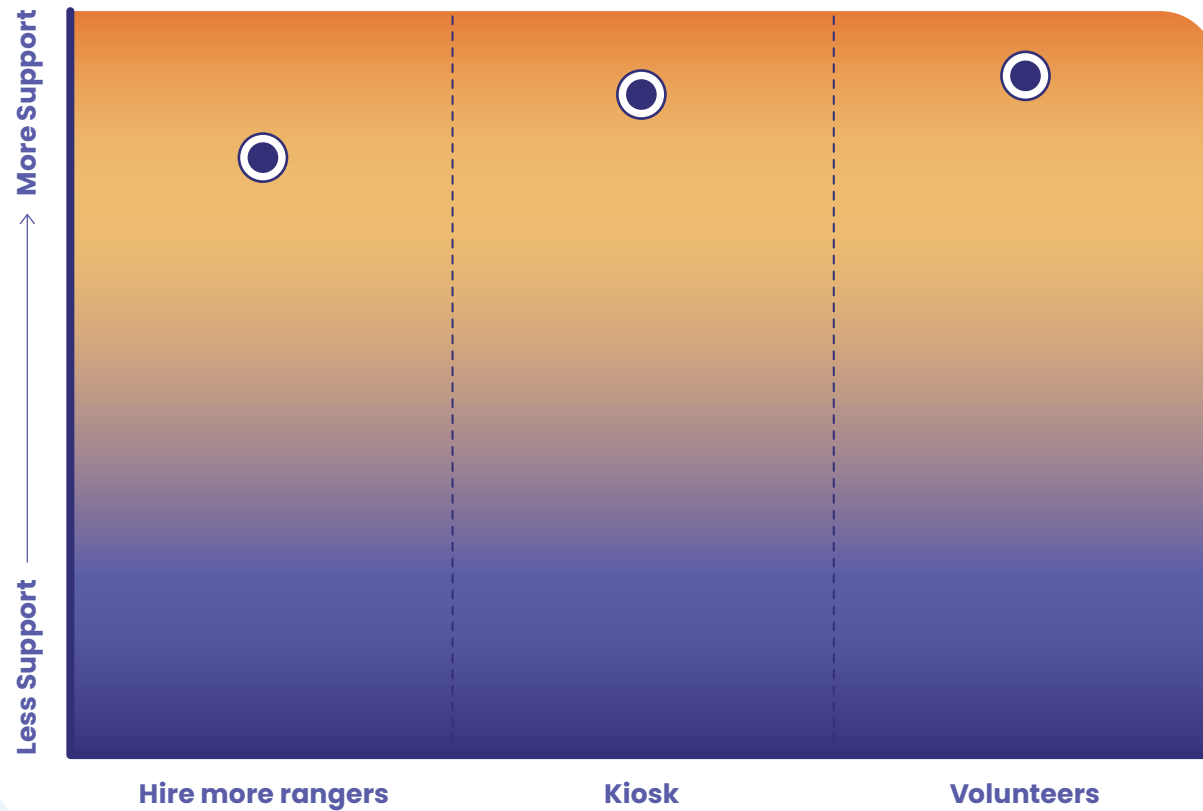
Dispersed camping is currently allowed on USFS and BLM in the Buttermilk Project Area.

Climbing Rangers

The USFS, with support from the ESIA, operates a climbing ranger program. There are currently two climbing rangers present in the area from October to June, but these two rangers are not sufficient for the number of visitors in the BIRPI Project Area each year. These climbing rangers were consulted for this Initiative document and provided their feedback about what the improvements they would like to see in the Buttermilk Project Area.

In addition to educating and supporting visitors, climbing rangers conduct climbing patrols to make assessments of climbing routes. Assessments evaluate visitor impacts including soil erosion at the base of routes and along trails; degradation of vegetation from crash pads; garbage, debris and human waste left behind; and fixed anchors and chalk markings on boulders. Rangers report to the appropriate agency regarding the issues and ask for enforcement when necessary. Climbing rangers can also be utilized to assess existing crowd and congestion levels. Monitoring use can subsequently inform improvements most suitable for the area, and can help stakeholders take action as appropriate when too many visitors attempt to set up camp.

GOAL	POTENTIAL ALTERNATIVES
Expand the existing ranger program and identify reliable funding for the program.	<p>Hire more rangers** Hiring additional climbing rangers.</p> <p>Kiosk Construct a small kiosk to answer questions and provide educational materials for visitors entering Buttermilk Country. The kiosk should have a QR code to provide more up to date information.</p> <p>Volunteers** Recruit volunteers to help rangers with educational programming, especially on busy weekends.</p> <p><i>**These are relatively low resistance alternatives that can be quickly implemented.</i></p>
NO ACTION CONSEQUENCE	
If the ranger program is not expanded, fewer visitors will be able to learn from the rangers, and undesirable impacts will continue.	
<p><i>“Station someone on busy weekends at the Buttermilk [Road] entrance” - Public comment</i></p>	

Table 5. Climbing Rangers Public Support**SUMMARY OF RESULTS**

- An similar number of participants liked the idea of volunteers helping with educational programs and the creation of a small kiosk prior to entering the Buttermilk Boulders area. A kiosk received one negative comment. A welcome kiosk is a fundable next step. See page 79 for more information.
- Most respondents that commented on these potential alternatives liked the prospect of hiring at least one more climbing ranger. Approximately 12% of participants do not want to hire more climbing rangers.

FUNDING

Building from the successful partnership with the ESIA, the USFS can find additional stewardship groups to help fund the expansion of the climbing ranger program. See page 106 for other potential funding options.

"A small welcome center ... with educational displays about local wildlife, cultural resources, and the land's first peoples, and ecological communities, would help remind climbers that the Buttermilks did not come into existence purely to entertain climbers."

"Consensus is hard when fragmented across multiple independent groups. A single organizational 'board' with participation from all stakeholders speaking as a unified voice would be much more effective in advocacy to USFS."



Climbing rangers can help mitigate the impact of climbers on the Buttermilk Boulders.

Education

Top 3

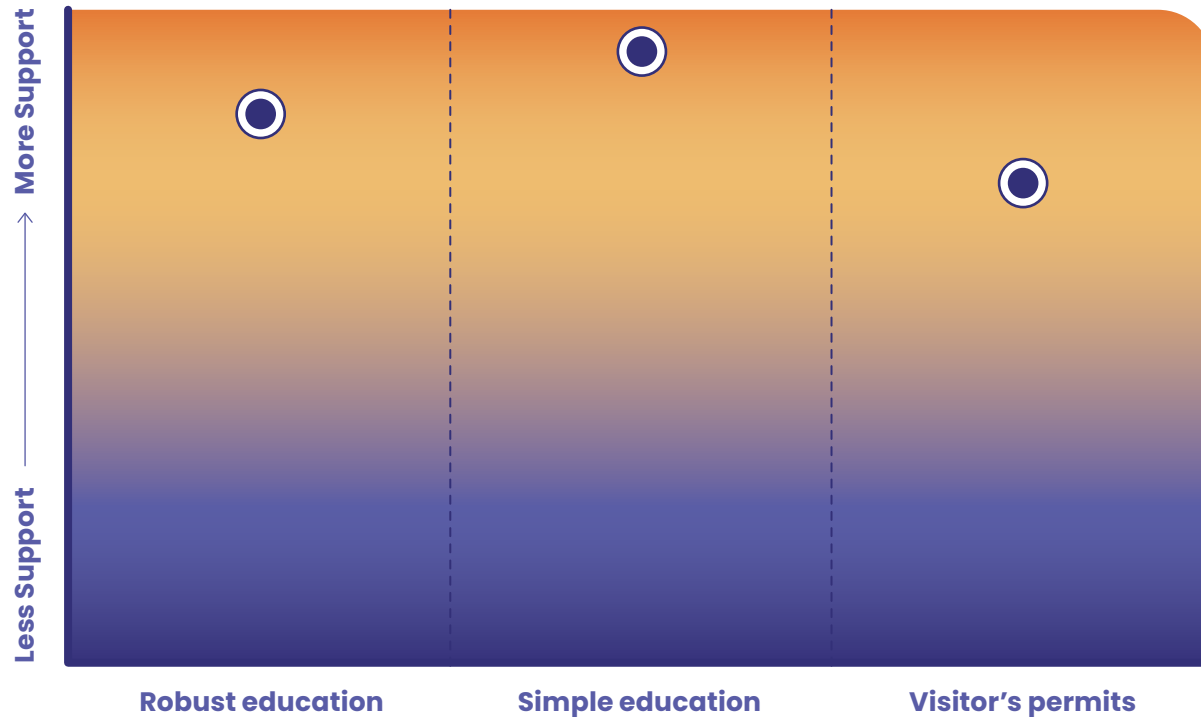
The Buttermilk Project Area lacks sufficient programming and signage to teach visitors about the land and the effects of irresponsible behavior by visitors. Perhaps as a result, the area has seen increased damage to native wildlife from hikers widening trails, dogs damaging vegetation, people parking in sensitive areas, campers leaving fires unattended, and climbers using undisturbed sites.

Potential educational solutions should be accessible and understandable to reach audiences with differing levels of context and experience recreating near the Buttermilk Boulders. Educational signage and programming should focus on educating visitors about the impact of their activities on the land, such as how long vegetation takes to grow back and about wildfire behavior in the Eastern Sierra. Solutions should work in tandem with tribal management, land stewards and stakeholders, and education and enforcement provided by USFS and BLM rangers and County law enforcement.

GOAL	POTENTIAL ALTERNATIVES
<p>Create an information platform for visitors to learn the rules and regulations of visiting the Buttermilks and how they can help protect the land and access to recreational opportunities.</p>	<p>Robust educational system Implement multiple educational options including wayfinding, interpretive and educational signage and thorough online resources that explain the importance of responsibly visiting the Buttermilk Project Area.</p>
<p>NO ACTION CONSEQUENCE</p> <p>Best practices for the Buttermilk Project Area will be up to the visitor to learn on their own. Visitors that are inadvertently damaging the land and cultural areas will continue to do so. Visitors to the area will not be aware of the land's tribal importance.</p>	<p>Simple educational system** Implement educational systems like simple signage near key areas, printed materials available at local outdoors retailers, and social media campaigns. Signs should reference leave no trace and camp like a pro principles. <i>**This is a relatively low resistance alternative that can be quickly implemented.</i></p> <p>Visitor's permits Require all visitors to obtain a permit to visit the Buttermilk Project Area. The permit should include an educational component.</p>

"Many people have no sense of how sensitive the area is and that trails require ongoing maintenance and education of proper leave-no-trace practices"
- Public comment

Table 6. Education Public Support



SUMMARY OF RESULTS

- Simple educational measures were the most popular alternative. Respondents were enthusiastic in their support for online resources and an education campaign facilitated by climbing rangers or through social media channels.
- Respondents had some mixed opinions of a visitor's permit with an educational component. Many were in favor, but others had reservations about requiring permits which may limit access.
- The USFS can partner with organizations like the Bishop Chamber of Commerce to help create and promote educational materials.

EXAMPLES OF THOROUGH ONLINE EDUCATION

TakeCareSierra.org

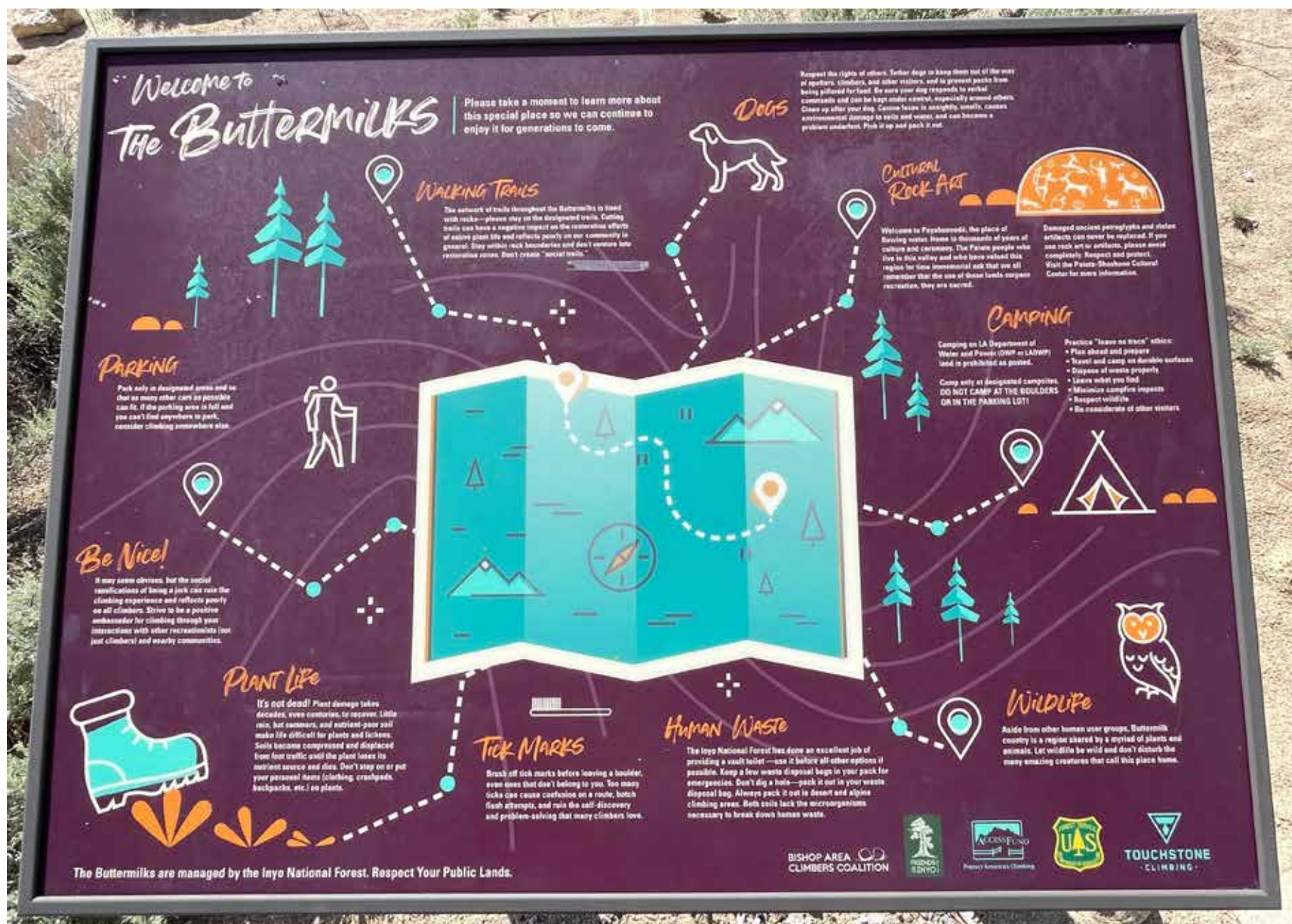
TakeCareTahoe.org

PROS AND CONS OF SIGNAGE

Most participants that commented on the robust educational campaign were in favor of it. However, some participants have concerns about too much signage in the Buttermilk Project Area.

"Climbers especially are out there to climb and are less likely to read interpretive signs. The current signs at the Buttermilks are often overlooked. Signs are also an eyesore. I don't think there should be more signs."

"Education/signage is important but should explain the consequences of not using designated areas or other violations. Signs are useless if people aren't following the rules. Enforcement is also necessary."



Existing educational signage in Buttermilk Country.

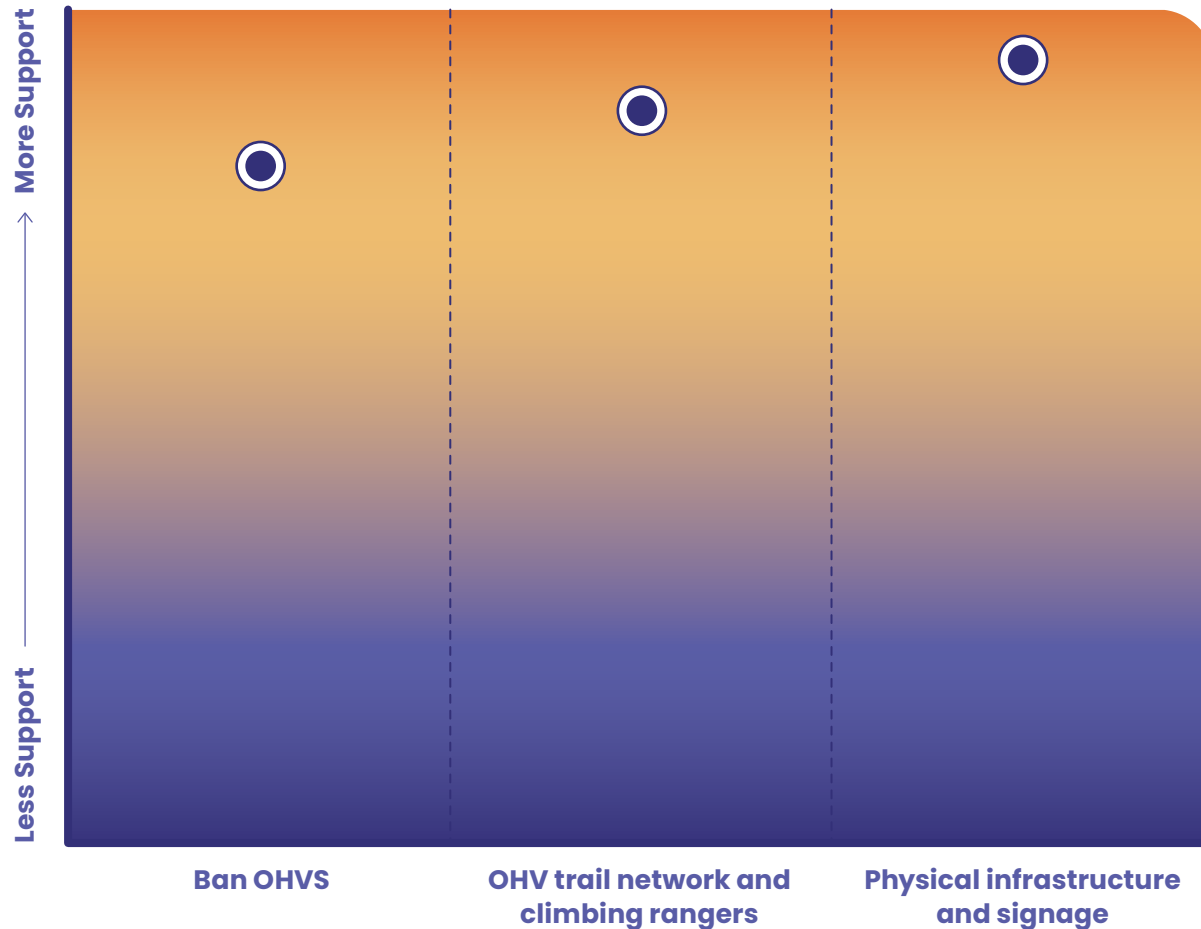
Habitat Destruction

Though most visitors walk along existing formal or informal (social) trails, some visitors do not, or have widened them over time walking side-by-side. The new and widened trails have contributed to erosion and damaged vegetation along the trails. Informal parking and inconsistent maintenance on Buttermilk Road has also contributed to erosion and damage to the land. Dirt bikes, mountain bikes, and off-road vehicles that travel off designated paths have damaged or destroyed many natural areas, including delicate desert plants that take decades to re-establish. Additionally, bouldering pads have crushed native vegetation, and waste left from visitors have harmed plants and wildlife. The potential solutions related to habitat destruction should work in combination with other presented solutions, including camping and parking regulations, educational programming, and increased maintenance and staffing.

According to the environmental assessment (Appendix C), there are 52 special status plant species and 32 special status wildlife species that have the potential to occur in the BIRPI Project Area, some of which are found in the Buttermilk Project Area. This includes endangered plants and animals.

GOAL	POTENTIAL ALTERNATIVES
Limit and redirect activities that lead to habitat destruction.	<p>Ban OHVs* Ban dirt bikes and off-highway vehicles (OHVs) in sensitive areas. <i>*Deemed infeasible by USFS</i></p>
NO ACTION CONSEQUENCE	<p>Improve trail network Improve the OHV trail network. Expand climbing ranger program to educate visitors.</p> <p>Infrastructure and signage** Use physical infrastructure and signage to show recreational users where they should use OHVs, hike, set up crash pads, camp and park.</p> <p><i>**These are relatively low resistance alternatives that can be quickly implemented.</i></p>

“Mountain bicyclists and/or motorcyclists have been developing new trails in springheads, seeps, and ephemeral waterways here. They have torn out vegetation, left permanent scars through mosses, lichens, and boulder surfaces, and sabotaged repeated efforts to re-vegetate and rake out tracks.”
-Public Comment

Table 7. Habitat Destruction Public Support**SUMMARY OF RESULTS**

- Respondents strongly preferred physical infrastructure and signage creating rules of use for the area, including OHV regulations, climbing rules, and where to walk and climb.
- There was also high support for the creation of specific OHV trails outside of the Buttermilk Project Area, though this alternative received fewer overall comments than the physical infrastructure alternative.
- 82% of participants that commented on this category were in favor of banning OHVs in the Buttermilk Project Area. Those against this idea had concerns about excluding certain recreational users. The USFS has deemed this alternative infeasible as the agency will not ban any recreational users from enjoying the Inyo National Forest.

“Create an actual OHV trail system. Tell them where to go, rather than where not to go”

“Education is important but excluding user groups won’t work. They’re already there and will continue to use existing trails - accommodate them - don’t shut them out. Educate on sensitive areas but allow for other ways to connect with their network of trails”

“Please identify all environmentally/culturally sensitive areas and close them to OHV traffic.”

“Signage and infrastructure may be a good place to start but enforcement will be necessary to prevent new trails/proliferation across habitat. Back to ranger programs...”



Netting has been placed around vulnerable vegetation to encourage visitors to stay out of these areas.

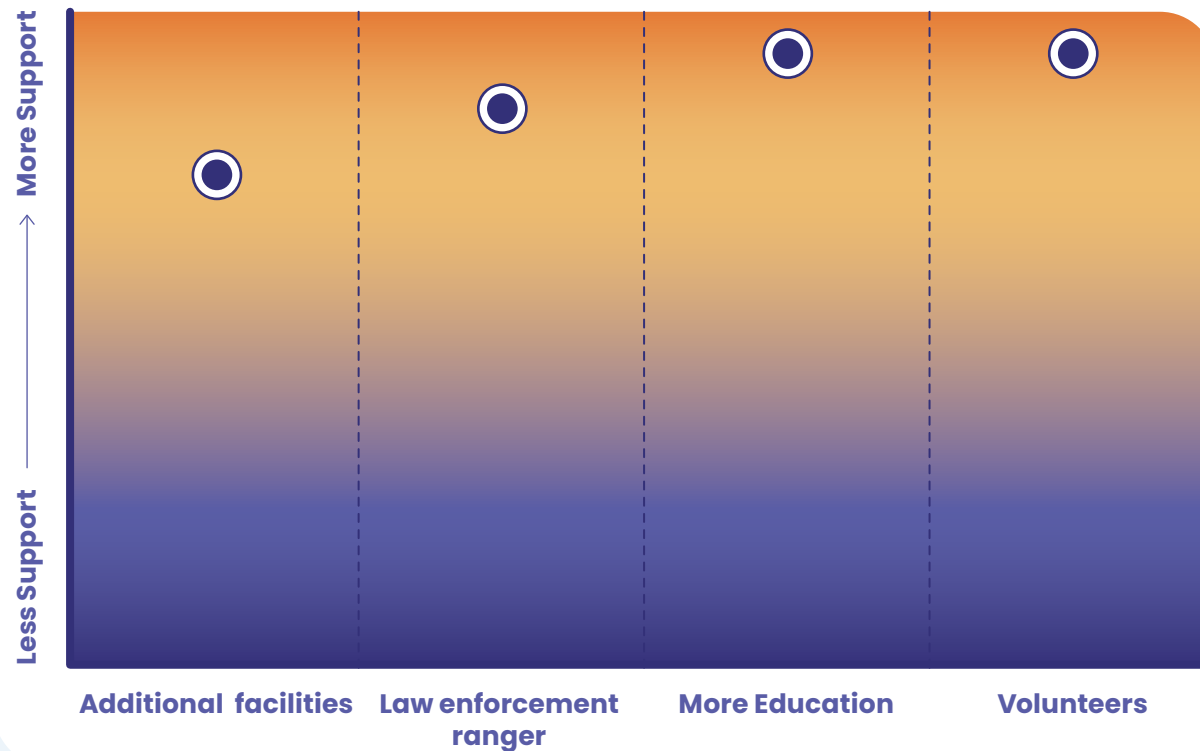
Maintenance and Staffing

Most of the BIRPI Project Area is managed by the USFS, BLM, and LADWP, with each agency overseeing different areas. However, the Buttermilk Project Area is not actively managed at a level commensurate with its popularity and usage. Maintenance issues have been observed throughout the area, which include the deterioration of the roadways and parking areas, waste left behind from visitors and wide and informal trails. The area is in need of land stewards and volunteers in addition to agency oversight to address these user-generated impacts on the landscape.

Currently there are no USFS designated trails in the Buttermilk Project Area and maintaining social trails is not a general practice of the USFS. NEPA studies would need to be conducted to formalize trails in the area prior to the establishment of a maintenance schedule.

In addition to the administration of educational materials and the installation of facilities for visitors to learn about protecting the land and recreating responsibly, enforcement is needed to ensure visitors are following Buttermilk Project Area rules and regulations.

GOAL	POTENTIAL ALTERNATIVES
<p>Reduce the amount of waste left behind from visitors, maintain infrastructure within the Buttermilk Project Area and regularly groom trails and repair fencing.</p>	<p>Additional facilities and/or infrastructure Install additional facilities, like trash receptacles, for visitors to use and hire staff to maintain these facilities. Install infrastructure like trail fencing to protect sensitive areas.</p>
NO ACTION CONSEQUENCE	<p>Signage, programming and law enforcement Implement educational and regulatory signage and programming about how to help maintain the area. Hire a law enforcement ranger to enforce rules.</p> <p>Volunteer clean up days** Recruit volunteers to join clean-up and maintenance days in the Buttermilk Project Area. <i>**This is a relatively low resistance alternative that can be quickly implemented.</i></p>
<p><i>"I think all efforts should consider that infrastructure improvements bring more people. While doing nothing is not a good option, future plans should balance keeping the remote character of the area and keeping amenities limited so as to not just add more users that the upgraded infrastructure cannot accommodate." - Public comment</i></p>	

Table 8. Maintenance and Staffing Public Support**SUMMARY OF RESULTS**

- Respondents overwhelmingly supported volunteer clean up days and additional education about how to maintain the area. During Workshop #2 law enforcement was presented as a separate alternative, however, law enforcement should be implemented in tandem with additional education to ensure visitors follow area rules.
- There were fewer overall comments about installing additional facilities in the area. 79% of those that commented on this alternative were in favor of more facilities and staff.

TYPES OF ENFORCEMENT

There was disagreement about law enforcement rangers, but an acknowledgment that enforcement is a necessary part of creating and maintaining a rules based system. 20% of participants that commented on this alternative were not in favor of hiring a law enforcement officer.

"Simple parking restrictions like not clogging the road or parking off road in the brush, should be enforced during peak times of the year. Year-round enforcement resources aren't likely needed. It would only take a few days of ticketing during the most impacted times to dramatically reduce damage and bad behavior."

"Education, not more law enforcement"

"Signage and education but still need some enforcement options - volunteers, stewards or paid by grants or local agencies"



Increased maintenance and staffing can help prevent further degradation to the vegetation in the area.

Overcrowding

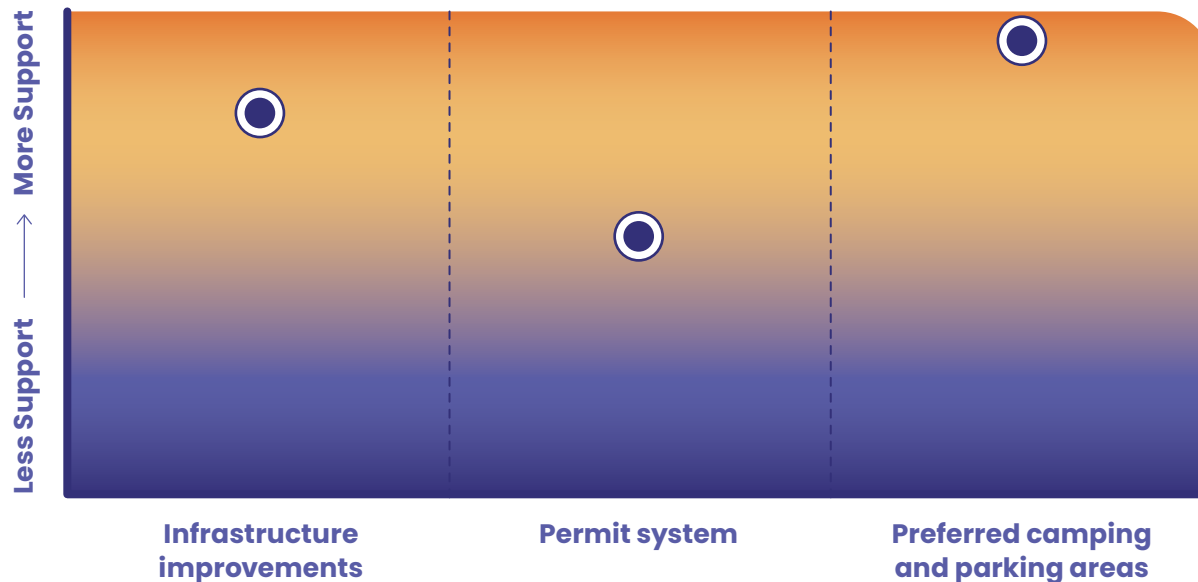
People have been enjoying the Buttermilk Project Area in a variety of ways for generations and this has only grown over time, becoming more acute in the last 20 years. With more advertising from the local business community and an increase in the popularity of climbing, visitor traffic has intensified in the Buttermilk Project Area. Both USFS and BLM have dispersed camping limits of 16 and 14 days in a row, respectively, but do not require permits to camp.

With overcrowding, informal camping and parking sites continue to expand along Buttermilk Road, causing damage to the land. Some visitors then walk over sensitive areas to create social trails to reach climbing areas from new camping and parking sites. Additionally, a lack of restrooms has led to human waste and dumping.

Together with maintenance and staffing solutions, overcrowding solutions can limit the number of people allowed to visit the Buttermilk Project Area each day, and can decrease the further destruction of habitats.

GOAL	POTENTIAL ALTERNATIVES
Address overcrowding challenges and consider options to best mitigate impact during peak seasons.	<p>Infrastructure improvements Implement significant infrastructure improvements to handle expected crowds, such as designated parking areas.</p> <p>Permit system Create a permit system for camping, limiting the number of days a visitor can stay in busy areas</p> <p>Preferred parking and camping areas Identify and promote preferred parking and camping areas.</p>
NO ACTION CONSEQUENCE	
The natural landscape will continue to degrade both in quality and experience.	

“Certainly the area is overcrowded and usage should be limited by a daily use permit such as a backcountry permit for backpacking.” – Public comment

Table 9. Overcrowding Public Support**SUMMARY OF RESULTS**

- Respondents overwhelmingly supported the promotion of preferred camping and parking areas.
- Significant infrastructure improvements received generally positive feedback, as there was an acknowledgment of growing popularity and increasing visitor numbers annually.

CLIMBING FESTIVALS

While not in favor of permits for visitors, the BACC does not think special permits for festivals should be issued on holiday weekends. Festivals on already busy holiday weekends put undue pressure on climbing resources.

PROS AND CONS OF PERMITS

There were disagreements over permits limiting the number of visitors. While half of the responding participants supported permits, others are worried about accessibility, including the BACC and the Access Fund.

The USFS can consider only permitting certain areas with Buttermilk Country, or limiting permits to certain climbs or specific days. Permits should be available both online and in-person at local pick-up spots.

"A permit system destroys the ability for a quick after work trail run or bouldering session. Permit systems also make areas less accessible to people who don't have reliable internet access or internet skills."

"Require permits to use/camp/park. The amount of traffic to the area needs to be reduced."

"The most important issues to me are controlling the numbers of visitors, developing permitted camping sites and education..."



An informal trail delineated by rocks leading to a climbing area. When the climbing area becomes too crowded visitors walk outside of the path into the vegetation.

Parking

Top 3

Buttermilk Road is the only road connecting to Buttermilk Country and other natural areas nearby. Most visitors that arrive by car park on the shoulder of Buttermilk Road. Over time, the creation of informal parking areas has caused destruction to native vegetation, habitats, and wildlife areas, and has contributed to the erosion of Buttermilk Road.

Further, these informal parking areas lack durability and delineation, which has contributed to the growth/incursion and damage of the surrounding landscape, conflicts between recreational users, and traffic jams. The USFS has also expressed concerns related to emergency access in Buttermilk Country due to the consequences of this informal parking on both sides of the road.

GOAL

Reduce informal parking areas and replace with designated parking lots that have barriers to prevent vegetation damage.

NO ACTION CONSEQUENCE

The road will become impassable for emergency vehicles due to parking along each side. Botanical and cultural impacts will increase as people park in new areas and alter hydrology and increase erosion.

POTENTIAL ALTERNATIVES

Paved parking lots*

Create paved parking lots.
**Deemed infeasible by USFS.*

Permits for parking

Require the use of parking permits.

Reduce parking***

Close off popular parking areas to limit the number of visitors able to park.
****Not recommended by advisory committee*

Signage and delineation**

Install clear parking signage and guidance including lot delineation with low-cost materials. Limited signage is necessary to enforce parking restrictions and rules.

Shuttle service**

Create a shuttle service from the City of Bishop, especially during festivals.

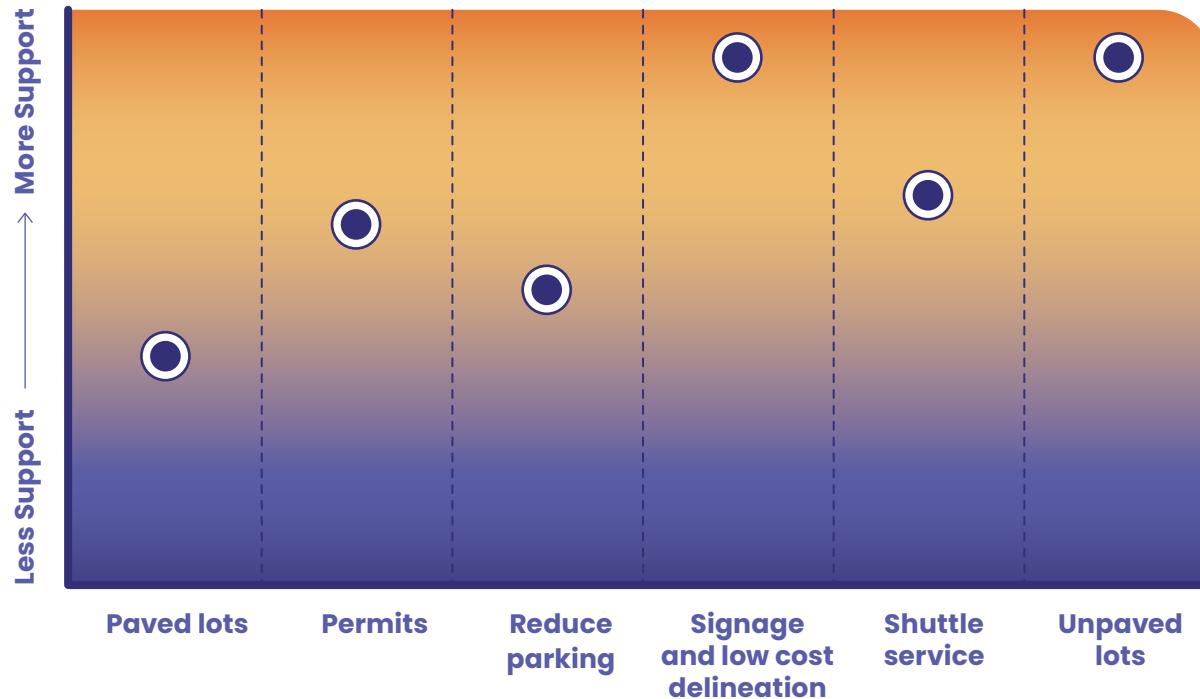
Unpaved parking lots

Create unpaved parking lots.

***These are relatively low resistance alternatives that can be quickly implemented.*

"There isn't enough parking during peak season, particularly on weekends and holidays, which leads to people parking in non-designated areas and destroying vegetation." - Public comment

Table 10. Parking Public Support



SUMMARY OF RESULTS

- Low cost signage and parking delineation was overwhelmingly supported, and one of the most commented-on alternatives in the engagement process.
- Parking lots were supported in general, with unpaved lots being the preference from a majority of respondents. Paved lots received more divisive comments. The USFS deemed paved parking lots to be infeasible due to the pavement maintenance requirements on the dynamic soils and terrain in the area.
- A shuttle service is popular, though there are concerns if the service would actually be used. Limiting the service to busy weekends like during festivals may increase ridership.
- There were concerns about limiting access to the boulders if parking permits are required.
- Some participants wrote-in that they would like to reduce available parking. However, this is not recommended as there is a demonstrated need for more parking.

PROS AND CONS OF PERMITS

While parking lots in general are supported, participants left comments on how they think parking should best be distributed in the area.

“Non-paved parking area across road from toilets in previous burned area (build it and they will park there). Parking lot doesn’t have to be paved.”

“Consider a central parking lot below the Peabody Boulders with trailheads to Main Buttermilks, Dales Camp and the Pollen Grains.”

“There should be much more limited parking along the main road at the bouldering area, perhaps just to one side of the road.”



Cars currently park in informal spaces along Buttermilk Road. The lack of designated parking, parking space delineation, and signage is leading to the proliferation of informal parking areas that destroy native plants and contribute to erosion.

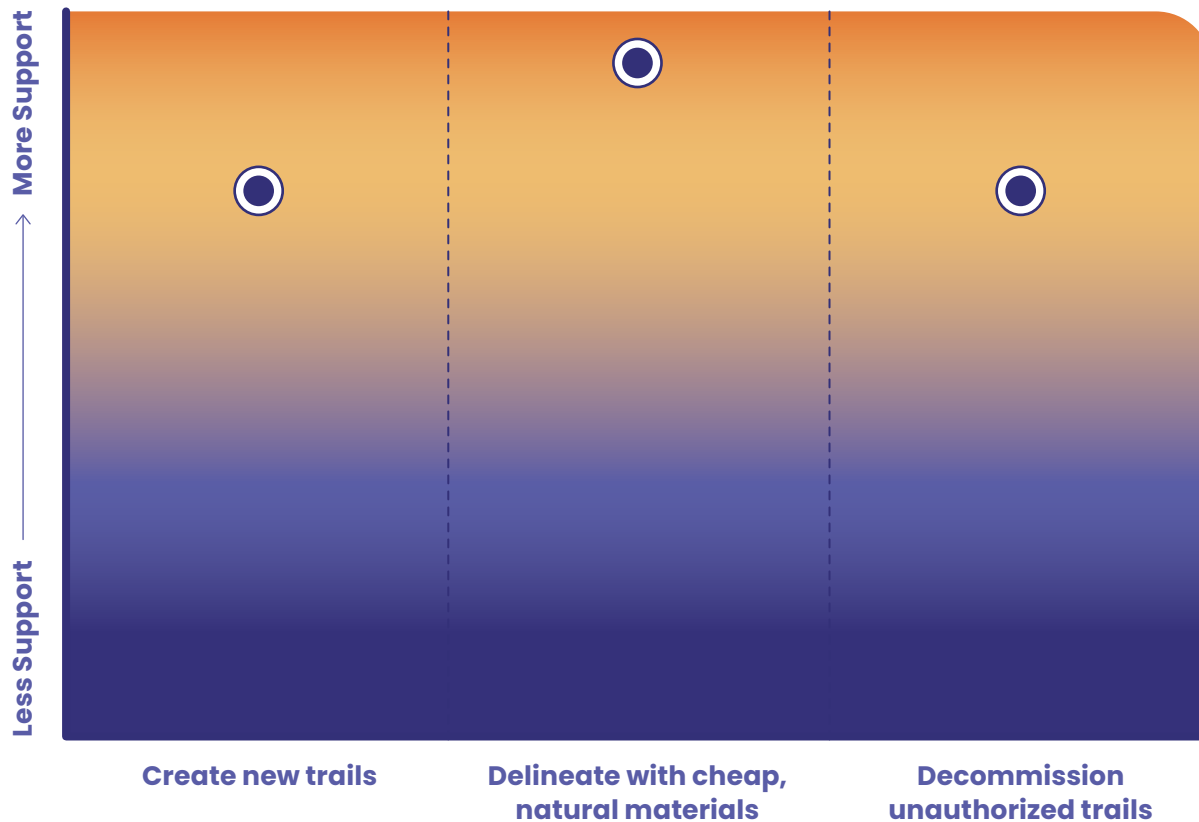
Trails

Most trails in the area are informal, created by the passage of visitors (“social trails”) accessing climbing boulders from parking and camping areas. Informal trails are created by trampling vegetation which destroys plants and contributes to erosion. These trails are also continually widened as visitors walk side-by-side or in large groups along the trail. Damage from these informal trails has destroyed much of the natural area near climbing destinations, and in some cases this damage is worsened by off-road vehicles and dirt and mountain bikes.

Designating and delineating existing social trails, and/or creating a formal trail network will allow landowners to choose paths with the least potential to further damage the land. These trails should also be chosen with future maintenance considerations in mind, and should be reinforced to accommodate visitor volumes.

GOAL	POTENTIAL ALTERNATIVES
Consolidate and formalize existing trails to alleviate the impact on natural areas and mitigate potential impacts to cultural resources.	<p>Create new trails Formalize a loop trail network connecting parking to the entire climbing area as well as a network through the Tungsten Hills.</p> <p>Delineate with natural materials** Delineate trails with signage and natural materials. Reinforce heavily-used trails and parking access points with natural materials. <i>**This is a relatively low resistance alternative that can be quickly implemented.</i></p> <p>Decommission unauthorized trails Delineate and close trails with permanent materials.</p>
NO ACTION CONSEQUENCE	
Informal trails will continue to form, leading to increased damage and erosion.	

“General climbers stick to established trails but sometimes those unfamiliar with the area follow social trails destroying natural area.” - Public comment

Table 11. Trails Public Support**SOCIAL TRAILS**

Read more about the social trails in the Buttermilk Project Area on page 91.

SUMMARY OF RESULTS

- Most respondents supported delineating trails with cheap materials in the short term. This alternative received zero negative responses.
- There was also support for creating new trails, either a formalized trail network through the Tungsten Hills or a loop trail around the bouldering area.
- Respondents also generally supported a permanent closure of some trails and permanent delineation of other trails, though there were concerns that closing trail may limit accessibility to areas beyond the boulders.

"A low wildlife-permeable fence along the road - nothing serious, just a low visual border - could reduce trail proliferation that comes directly off the road."

"Eliminating access to undesirable trail routes greatly concerns me. Undesirable to who? Determined by who? The climber use is heavily weighted here but off road users and bike riders use this area too and like the loop routes available to them. Horseback riders do too, so considering routes for all these user groups is important."



Using rocks and other natural features is a low-cost way to delineate trails.

Tribal Involvement

The Buttermilk Project Area is native tribal land for the Bishop Paiute Tribe who have been stewards of the land for generations. The land holds cultural and historical significance for many Paiute Tribes, with sacred sites located throughout the Buttermilk Project Area, including near popular climbing destinations.

The Bishop Tribal Council should be involved in the protection, administration, and long term planning efforts of this area. The Council should be notified of ongoing decision making, and be involved in planning and programming on-site. Educational programming led by the Paiute Tribe can teach visitors about the significance of the land, and why it is important to respect it.

Tribal representation in the Buttermilk Project Area could be manifested by including Paiute names for plants on replanting initiatives, interpretation included in signage, a tribal climbing ranger, cultural training for staff and volunteers, and tribal input of potential infrastructure changes.

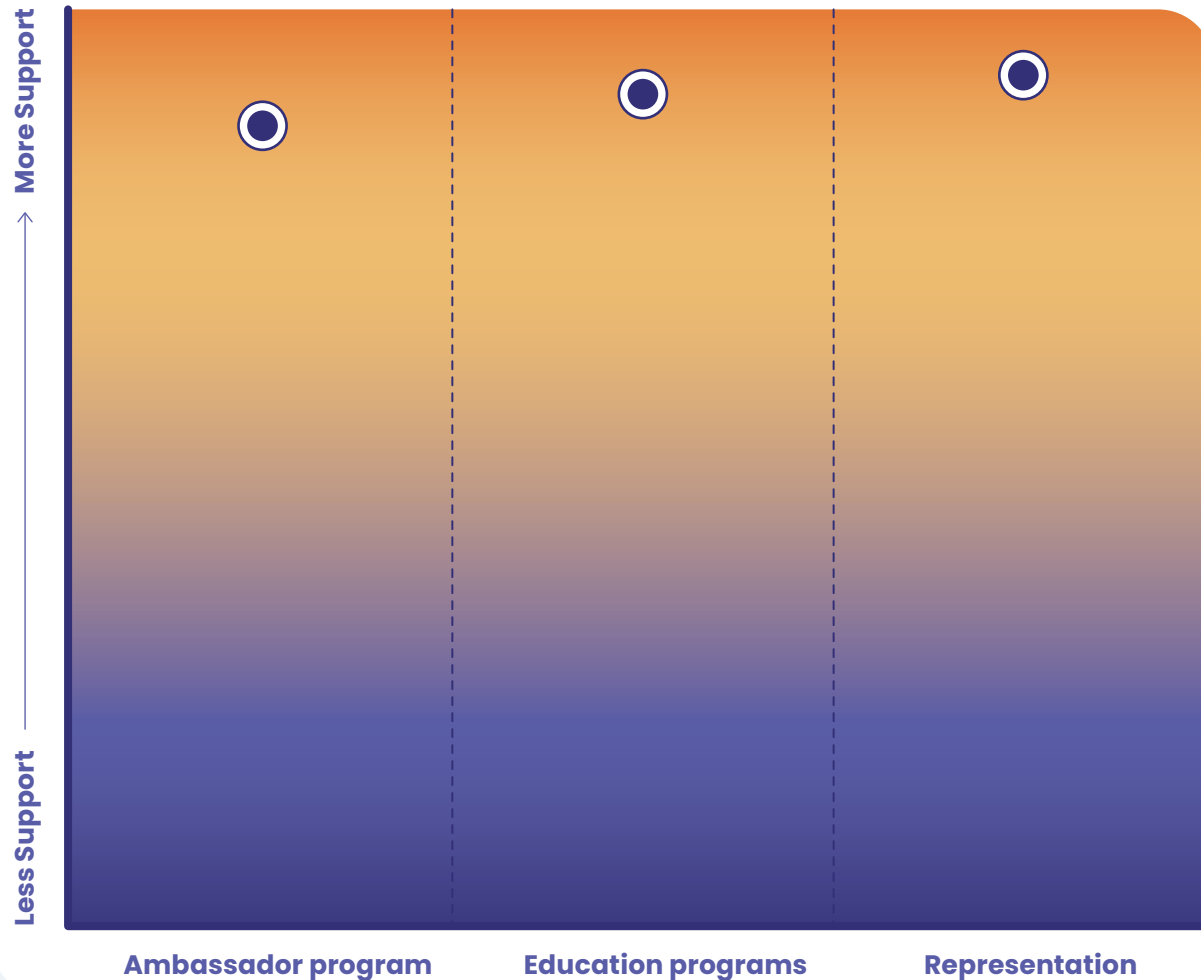
GOAL	POTENTIAL ALTERNATIVES
<p>Agencies consult with the Bishop Paiute Tribe regarding management decisions made in the Buttermilk Project Area.</p>	<p>Ambassador and ranger program Encourage the Paiute Tribe to identify an ambassador that can work with the USFS tribal liaison. Create a tribal climbing ranger program.</p> <p>Educational programs Create educational programs led by tribe members and expand tribal involvement in the Buttermilk Project Area.</p> <p>Representation** Request for tribal representation on boards and committees and early notification of planning initiatives. <i>**This is a relatively low resistance alternative that can be quickly implemented.</i></p>
NO ACTION CONSEQUENCE	
<p>The local tribes will be uninformed and unengaged regarding decisions affecting the management of their native land.</p>	

“Information about indigenous tribes would benefit the area by helping inform visitors about the history and cultural value of the land they are enjoying.”
- Public comment

FEEDBACK FROM LOCAL TRIBE REPRESENTATIVES

- Tribes should be involved in the planning process from the start
- The land should be kept as pristine as possible for future generations
- Education and ambassador programs are vital to the protection of the land
- Rangers and monitors from the tribe should be consulted and utilized to document artifacts and cultural resources throughout the Buttermilk Project Area.
- For more information, on comments from tribal representatives refer to Appendix D.

Table 12. Tribal Involvement Public Support



SUMMARY OF RESULTS

- Tribal involvement was one of the most agreed upon and popular categories among respondents. None of the alternatives received negative comments.
- All solutions were met with enthusiastic support, but there were fewer total comments for educational programs or an ambassador program.
- In addition to public support, the USFS also supports further representation of tribal culture in the Buttermilk Project Area.

“Please recognize Tribes as first users and highest priority stakeholders. Offer them first and priority engagement opportunity”

“Allow opportunity for all tribal entities to participate in scoping process.”

“This is an awesome and long overdue goal!”

“The tribes should receive priority over recreational groups for use considerations.”



Sacred sites for the Paiute Tribe are located throughout the Buttermilk Project Area.

Wildfires

Currently, visitors who are camping in the area do so via dispersed and informal campsites. Lacking formal infrastructure for the use of fire, like fire pits, the area is at heightened risk for wildfires. This risk rises as the number of informal campsites increases in the area.

Nearby neighbors are concerned about the risk of wildfire due to unattended campfires. Over the years, campsites and campfires have expanded further east along Buttermilk Road closer to the Starlite neighborhood, including illegally on LADWP land.



Informal camping and fire pits increase wildfire risk throughout the Buttermilks.

GOAL

Reduce the risk of fire throughout the area by implementing fire restrictions or providing formal infrastructure for the use of fire. Educate visitors about the danger of wildfire in the Eastern Sierra.

NO ACTION CONSEQUENCE

There will be an increased risk for wildfire.

POTENTIAL ALTERNATIVES

Fire ban**

Ban fires between specific elevations based on seasonal conditions.

***This is a relatively low resistance alternative that can be quickly implemented.*

Seasonal fire ban

Ban fires during dry seasons with high wildfire risk.

Fire pits with grills limited to developed campsites

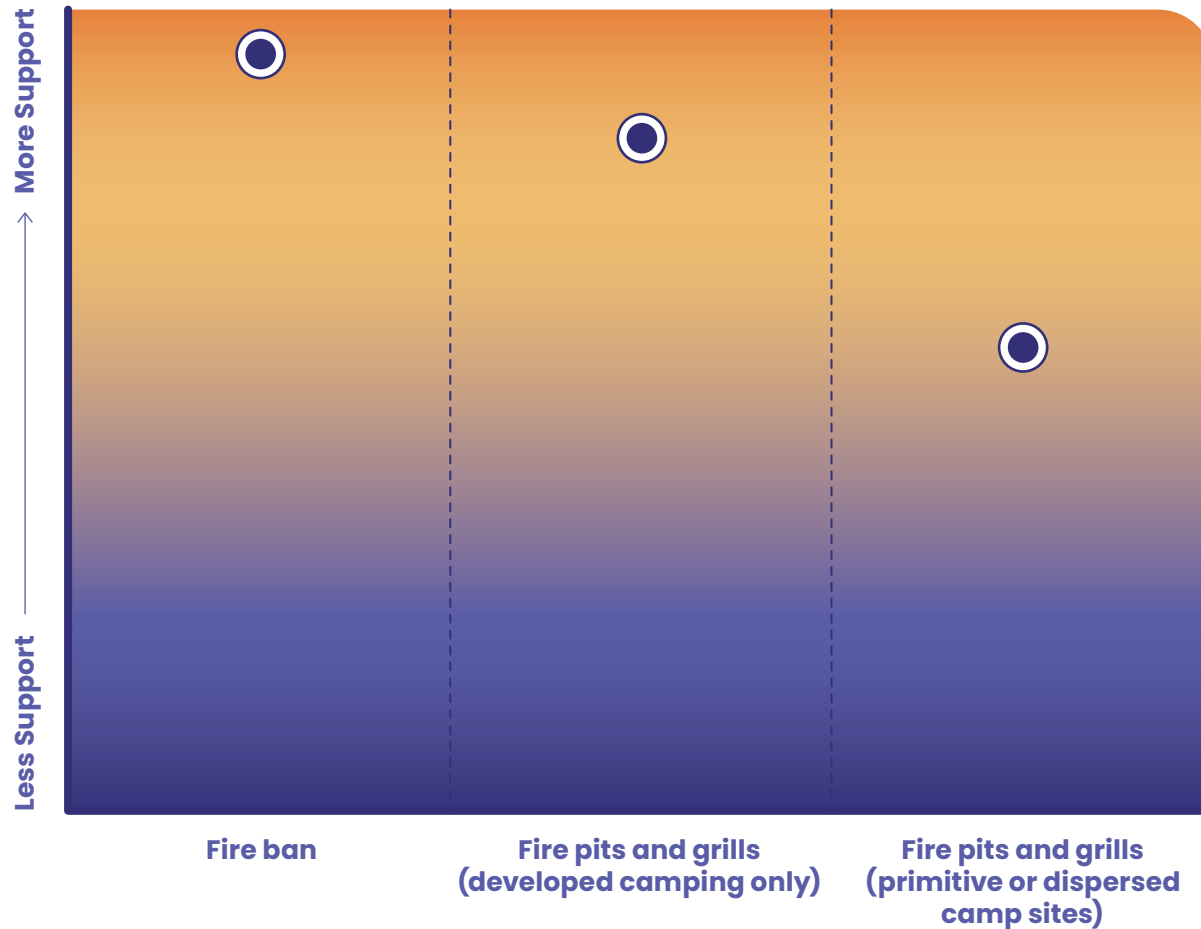
Allow fires only in developed campsites with amenities and staff.

Fire pits with grills in dispersed campsites

Install fire infrastructure in designated primitive campsites and popular dispersed camping areas.

"Fire restrictions are ever changing and difficult to communicate. I would be in favor of a blanket ban on campfires in the Buttermilks." - Public comment

"Since this process will take years to play out, is there any chance moratoriums could be put in place on critical issues, like fires, in the interim?" - Public comment

Table 13. Wildfires Public Support**SUMMARY OF RESULTS**

- Respondents generally agreed about the safety and dangers of having fires, especially without proper infrastructure.
- The responses showed that participants want fires to be limited to areas with proper infrastructure, such as formal, developed campsites, or be banned all together. There were fewer positive responses and more negative responses for putting fire pits in primitive campsites or informal campsites.
- While not suggested within the public engagement process, a seasonal fire ban is an additional option the USFS can consider in reducing wildfire risk.
- Fire bans could be a temporary moratorium until more specific parameters and infrastructure for fires is established.

"Easy to limit fires to stoves/portables below a certain altitude. No open pits. No open flames."

"Campfires anywhere in the area are a problem and should not be allowed."

"Banning fires seems like the best possible solution."

"Where would fuel to burn come from? (Right now, people are taking fence posts on their way through Starlite. No, really!) Any plan that allows fires must include a sustainable way for people to buy fuel (which they won't agree to pay for)"



Adding fire pits to camping areas can prevent fires from spreading. (Photo Credit: Lone Pine Campground)



Next Steps and Implementation

04

Next Steps and Implementation

This chapter offers suggestions for quick wins that the land managers can take to make a difference in the Buttermilk Project Area without significant collaboration, time, or cost. This chapter also provides suggestions for implementing certain alternatives discussed in Chapter 3 including climbing policies, trail delineation, and signage considerations. These suggestions are for reference, as the future organizational body, including the key agencies in charge, such as the USFS, Inyo County, LADWP, BLM, Bishop Paiute Tribe, will need to determine which of these suggestions will best meet the needs of the area.



Quick Actions

Quick wins are recommendations that the USFS can implement with relative ease and without significant coordination required between all jurisdictions. These suggestions can help the USFS determine which other solutions would work best in the Buttermilk Project Area and can prepare visitors for other changes.

Data Tracking

Gathering data on the Buttermilk Project Area and beyond is difficult and diffuse due to a lack of data and differing land management data collection tactics. Establishing baseline data for the area can help create a clear understanding of where there are places that should be prioritized for improvement, and where implementing improvements has made a difference. Higher quality and more data will help also determine the carrying capacity of the land. Capturing consistent and thorough data throughout the year will help identify peaks and off-peak seasons for the area. This data will help decision makers use quantitative data, instead of anecdotal data, in future planning decisions.

Tracking the condition of Buttermilk Road can help the County understand the times of year where damage to the road increases and can help the County implement mitigation measures prior to these seasons. As a part of the Economic Impact of Rock Climbing and Bouldering in Bishop report led by the BACC and the Access Fund, researchers tracked the number of climbers visiting, parking, camping, and spending money in the BIRPI Project Area.¹ Tracking these numbers at regular intervals, such as annually, can help the managing landowners understand how the number of visitors changes over time.

Tracking data can also help in the process of creating policy or infrastructure change. For example, tracking the peak number of vehicles parked near the Buttermilk Boulders can establish a baseline for the number of formalized parking spaces that should be developed to prevent further damage to the land.

¹ *Maples, James N, Michael J Bradley, Mary Boujaoude, Mora Rehm, and Tim Golden. Economic Impact of Rock Climbers in Bishop, California.*

Similarly, the ESIA has collected data about the social trails in the BIRPI Project Area which can be useful for landowners to track the creation of new social trails. However, additional use data should be collected for other popular trailheads like the Horton Trailhead and the Upper Buttermilk Loop to better understand destination trends.

BLM has maps of established dispersed camping sites that climbing rangers can use to help prevent the creation of new sites. The USFS should also create maps of their land in the Buttermilk Project Area to establish camping and parking area baseline data.

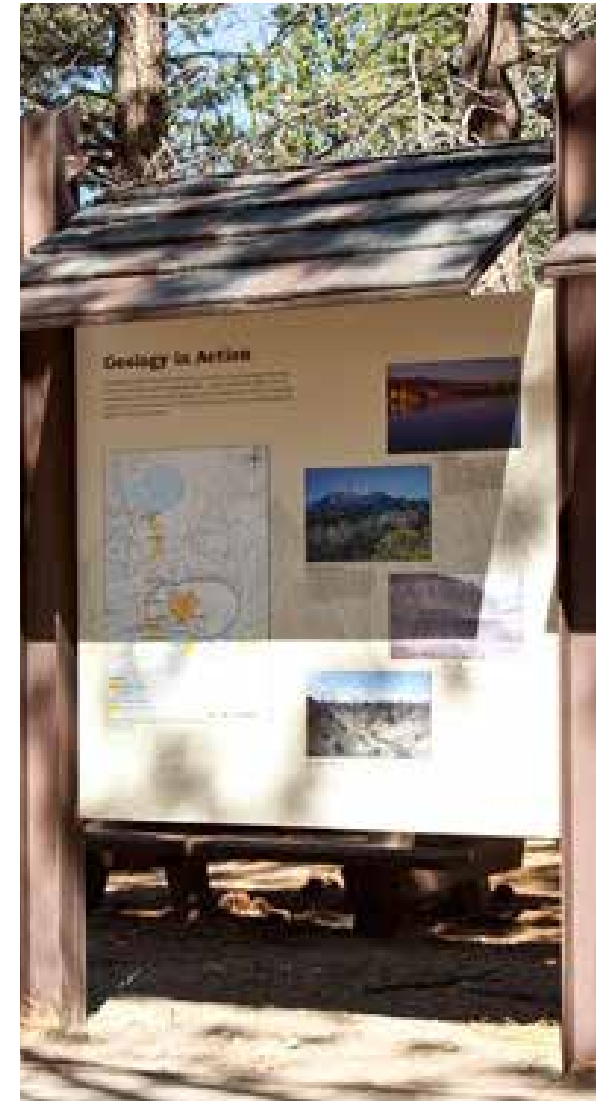
The USFS can continue to lean on organizations and volunteers like the BACC and ESIA to help collect data, however this data should be available in a central location.

Welcome Kiosk

Within the climbing ranger category (page 49), one of the alternative options is to implement a welcome center prior to entry to the Buttermilk Boulders. This alternative received high support, and due to its relative cost effectiveness and potential for benefits it should be implemented by the USFS. A small welcome center or welcome kiosk could vary in size and scope based on funding availability and USFS priorities. This center could be a staffed building that visitors can enter, or it could be a kiosk where visitors must stop prior to the bouldering area. Staff at the welcome center can ensure visitors are aware of the basic principles of leaving no trace and can point visitors to preferred camping and parking areas. If visitor permits are implemented, this could also be a place where staff can check for the required permits. Additionally, welcome center staff can help in monitoring issues in the Buttermilk Project Area and collecting data.

Rather than a staffed structure, the welcome center could instead be an information kiosk placed near the toilet. This kiosk should provide detailed information about the land and the facilities available, emergency procedures, and maps to popular recreational places in the area. This kiosk should include education about the unique ecology of the land, impacts of incremental vegetation degradation, fire behavior in the Eastern Sierra, respect for cultural resources, and traditional and cultural place names and plant names. The kiosk should also include specific guidance on climbing and information about the history of the land and the ongoing practices of the Paiute Tribe.

There is an existing kiosk at the Buttermilk Road/ Highway 168 intersection. This kiosk is outdated and is a good candidate for renovation. Other potential places for a kiosk could be near the existing toilets or at entrance areas to bouldering sites. More information about content for a kiosk can be found on page 82.



Welcome kiosks do not require staffing, but provide information for visitors like maps, safety information, and area regulations. Photo credit: Mammoth Lakes Trail System

Best Practices

These suggested actions are steps the future Buttermilk Project Area's organizational body can take to implement some of the alternatives introduced in Chapter 3. These actions describe best practices taken from other agencies and recreational areas across the country with similar challenges to the BIRPI Project Area. These actions are intended to be a reference for the land managers rather than a set of specific recommendations.

Climbing Etiquette

The Buttermilk Country climbing area is one of the most popular in the Western United States. To ensure a positive experience for all visitors and to protect the natural landscape climbing etiquette and rules should be followed. These rules should be included in educational materials created for the Buttermilk Project Area, and climbing rangers should encourage visitors to follow them.

PRESERVING THE LANDSCAPE

The Buttermilk Boulders are in the Pinyon-Juniper Woodland and Sagebrush Scrub plant community ranges. While the plants in this range are hardy, if they are damaged they can be overtaken by invasive weeds and grasses which will destroy the native landscape and can take decades to re-establish. These invasive species are not drought or fire resistant, and many animals rely on native species as a food source, specifically the migratory Round Valley deer herds. There is a risk for damage to these plant communities from climbers crushing them with crash pads, gathering in large groups, and spreading out materials around the bouldering areas.

The Buttermilk Project Area gets seasonal rainfall and snow melt. Therefore many of the streams and washes are ephemeral. Water flow patterns can be disrupted by carved out trails from OHVS and heavy foot traffic which alters the landscape. Climbers should be mindful of where they walk, and minimize group sizes. Cultural sites should also be preserved

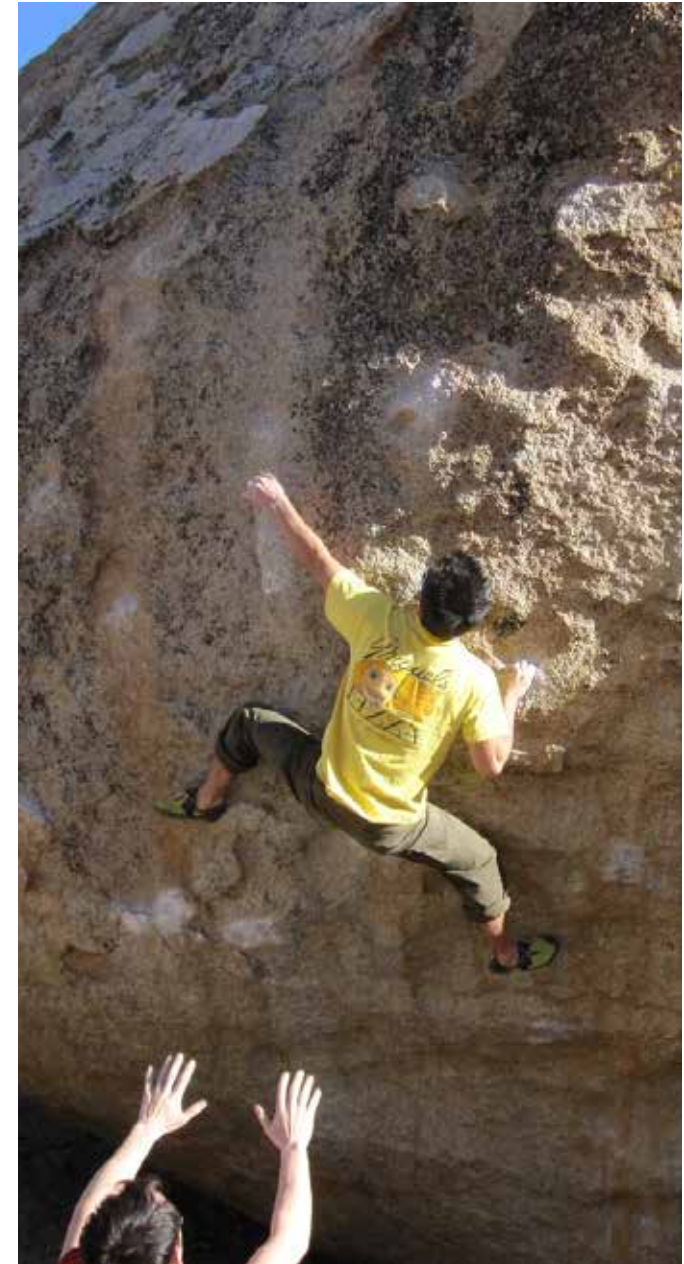
and respected by climbers. There are sites within the BIRPI Project Area that were formerly homes and ceremonial centers, or have petroglyphs that are thousands of years old and are sacred to the Paiute Tribe. These areas should remain undisturbed and avoided by climbers.

Climbing rules help keep climbers safe while respecting the natural environment and creating a pleasant space for the next visitor.

EXAMPLE CLIMBING RULES

- ◆ No liquid chalk
 - Liquid chalk is not easily removable and it solidifies creating a glassy, slick surface
- ◆ Brush off excess chalk and tick marks
 - Brush the holds before and after climbing
- ◆ Follow leave no trace principles
 - These principles include cleaning up all trash, not taking anything from the land, walking on durable surfaces and respecting wildlife
- ◆ Don't crush vegetation

- Stay within designated landing zones. Be careful with pad placement and keep climbing materials contained and organized
- Check pads and clothing for Russian Thistle so seeds are not transported
- Stay on trails
- ◆ Be respectful of other climbers
 - Do not play loud music, keep gear orderly, do not cut in line for attempts on a crowded boulder, and do not offer unsolicited advice (beta)
- ◆ Respect cultural areas
 - Do not climb on any closed off boulders and do not enter closed areas
 - Do not climb over or touch petroglyphs
 - Do not remove any artifacts
- ◆ Do not chip or glue rock
- ◆ Do not place bolts if the rock does not call for it. Utilize existing bolts.
 - Paint bolts and hangers to match the rock
- ◆ Do not top rope directly from fixed hardware
- ◆ Leave pets at home if possible
- Pack out pet waste
- Do not tether pets to vegetation
- Keep pets leashed at all times
- ◆ Stay on marked trails and limit OHV activity to marked areas
- ◆ Clean shoes before climbing to prevent polishing
- ◆ Camping
 - Observe length of stay limits
 - Obtain fire permits and observe restrictions
 - Do not camp on LADWP land
 - Camp 100 ft away from water sources
 - Pack out all human waste if possible. If not, dig a cathole at least 8" deep and 100 ft away from water sources
- ◆ Park to one side of the road
- ◆ Drive slowly, Buttermilk Road is 25mph
- ◆ Be respectful of other users on the road



Following climbing etiquette helps to protect the landscape and creates a better experience for all future visitors.

Signage

Signage in the Buttermilk Project Area was debated by the community (page 53) with some participants requesting more signage to better educate visitors and other participants requesting no signage for fear that it will ruin the landscape. If done properly, education signage can be effective at providing information while still blending in with the environment and respecting the landscape. There are different styles of signage that are needed in the Buttermilk Project Area including interpretive signage, wayfinding signage, trail signage, and signage prohibiting entry to some areas.

WELCOME KIOSK

A welcome kiosk is an opportunity to circulate information and educate visitors as they enter the Buttermilk Project Area. This kiosk could potentially be staffed and provide in-person engagement with visitors.

The kiosk should provide information relating to the area and its ethics and rules. Education on vegetation including scientific and Paiute names, uses, background, and how to best protect native plants should be included. Explanations on plant growing cycles and the “don’t crush the brush” philosophy can help educate visitors and change behavior.

Wildfire education could also be included, with explanations on wind and riparian corridors in the area increasing fire risk, as well as tutorials on how to minimize fire risk. Climbing and camping rules can also be disseminated, teaching the importance of leave no trace and the [camp like a pro programs](#), the importance of climbing etiquette such as no liquid chalk and the removal of tick marks, and where to camp and hike so as not to disturb native flora and fauna.

The welcome kiosk is also a key opportunity to teach visitors about the native history of the land and its importance to the Paiute Tribe. The kiosk could include tribal stories relating to the Buttermilk Project Area, explanations of the entire area’s cultural significance, and guidelines for protecting cultural resources, such as not touching artifacts.

The kiosk should utilize a QR code with a web landing page to help provide more timely information to visitors.

WAYFINDING SIGNAGE

Wayfinding signage helps people orient themselves in a space. Within the Buttermilk Project Area wayfinding may direct to camping and parking areas, or to certain boulders. Wayfinding signage should be presented simply to allow people to quickly process the information. Since the boulders are a world-famous destination, this signage should be interpretable even if a visitor is not proficient in English. Drivers and hikers should not need to stop to read wayfinding signage, and the signage should be placed at predictable intervals such as at turns. In addition to being convenient for visitors, wayfinding signage can also provide points of reference to identify locations that need maintenance or to help with a location description during an emergency.

See more on access and navigational signage on page 85.

REGULATORY SIGNAGE

Regulatory signage and warning signage should only be installed where necessary. In order for rules to be enforced by law enforcement rangers, regulatory signage has to be present. Regulatory signage can be used in the Buttermilk Project Area to prevent hikers from walking off-trail and to prevent OHV users from riding outside of OHV trails. Regulatory signage may also be needed in LADWP land to prevent camping.

Regulatory signage can also be used near popular parking and camping areas to designate parking on only one side of the road and encourage camping in already disturbed areas.

INTERPRETIVE AND EDUCATIONAL SIGNAGE

Interpretive signage can educate visitors about the land and teach them how to protect it. Interpretive signage should be appropriate for different user groups. For example, near the boulders interpretive signage may focus on climber safety. Interpretive signage should be concise and engaging and use colors and text that are clear and visually interesting. Rather than listing prohibited activities on the signage, it may be more effective to describe the consequences of not following the rules. For example, interpretive signage near campgrounds could provide information about the unique fire behavior in the Eastern Sierra such as during the Round Fire in 2015, rather than signage regulating campfires. Fire safety information can be coordinated with other wildfire resiliency campaigns like from the Eastern Sierra Wildfire Alliance (eswildfirealliance.org) or the Whitebark Institute (whitebarkinstitute.org). Interpretive signage can also help to create a sense of place, which may encourage visitors to take care of the Buttermilk Project Area.

CLIMBING RANGER FEEDBACK

The climbing rangers familiar with the entire BIRPI Project Area would like to see more educational signage within the Buttermilk Project Area. The rangers have noticed a positive difference in climber behavior in areas where signage has been placed, like near the Happy and Sad Boulders, compared to climber behavior in the Buttermilk Project Area.

The rangers would like to see educational signage that explains the unique concerns of a high desert environment. Due to the Buttermilk Project Area's popularity, climbers visit from around the world but may not realize how sensitive the ecology of the area is. Signage can inform visitors of basic climbing ethics like not crushing brush, staying on trails, and parking and camping in already disturbed areas.

BRANDING AND COLORS

The [USFS](#) and [BLM](#) have national branding and guidelines for signage on their land. This signage helps to reinforce to visitors that they are on federal land. LADWP is not a recreational agency and therefore does not have recreational signage standards. Establishing branding, colors, or naming conventions throughout the Buttermilk Project Area can create a sense of cohesion for visitors and affirm that they have arrived to Buttermilk Country. Techniques should also be considered to prevent vandalism to signage such as using durable and cleanable materials. Anecdotal evidence suggests appealing to patriotism by placing American flag stickers on signage may reduce vandalism.



*The USFS has branding and signage standards.
Photo credit: National Park Service (NPS)*



Existing trail signage in the Buttermilk Boulders area.

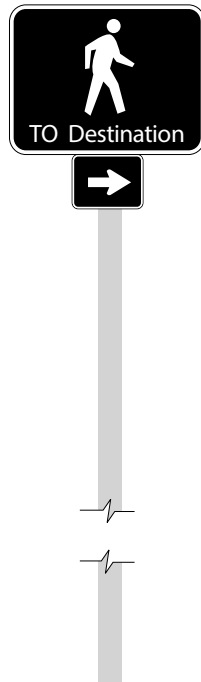
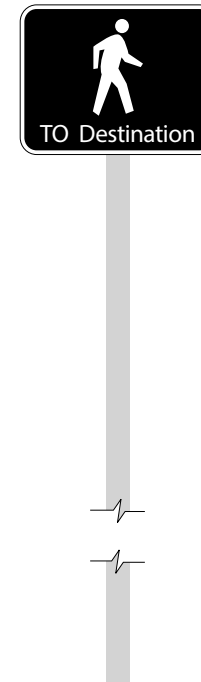
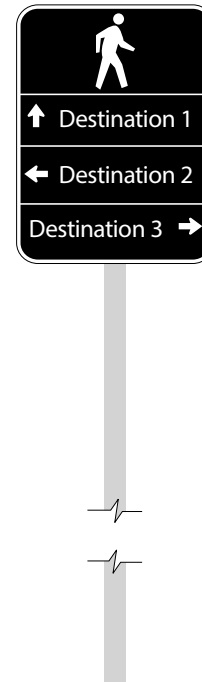
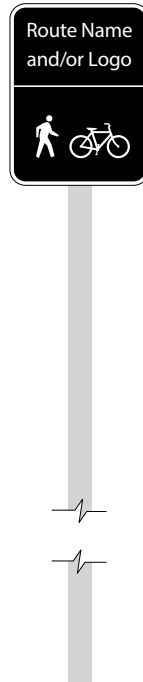
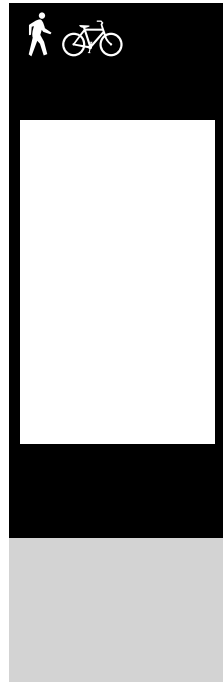
ACCESS AND NAVIGATIONAL SIGNAGE

The following pages further describe the different types of signage that could be used throughout the Buttermilk Project Area. Signage works best when implemented in a coordinated and consistent system.

All signage should follow national guidelines from the Manual on Uniform and Traffic Control Devices (MUTCD) and the Americans with Disabilities Act (ADA) as applicable.

ACCESS ELEMENTS

FUNDAMENTAL NAVIGATIONAL ELEMENTS

**Gateway monument**

Defines entry into a distinct area, or marks trailheads, access points, and landmarks. Opportunity for community-directed placemaking and integrated artwork.

Information Kiosk

Provides maps and navigational information; most effective when placed in locations where users may congregate, rest, or enter a trail or path.

Secondary access

Marks entry to trails or paths at locations where limited user traffic may not necessitate as much information as information kiosks.

Decision

Clarifies route options where two or more routes converge.

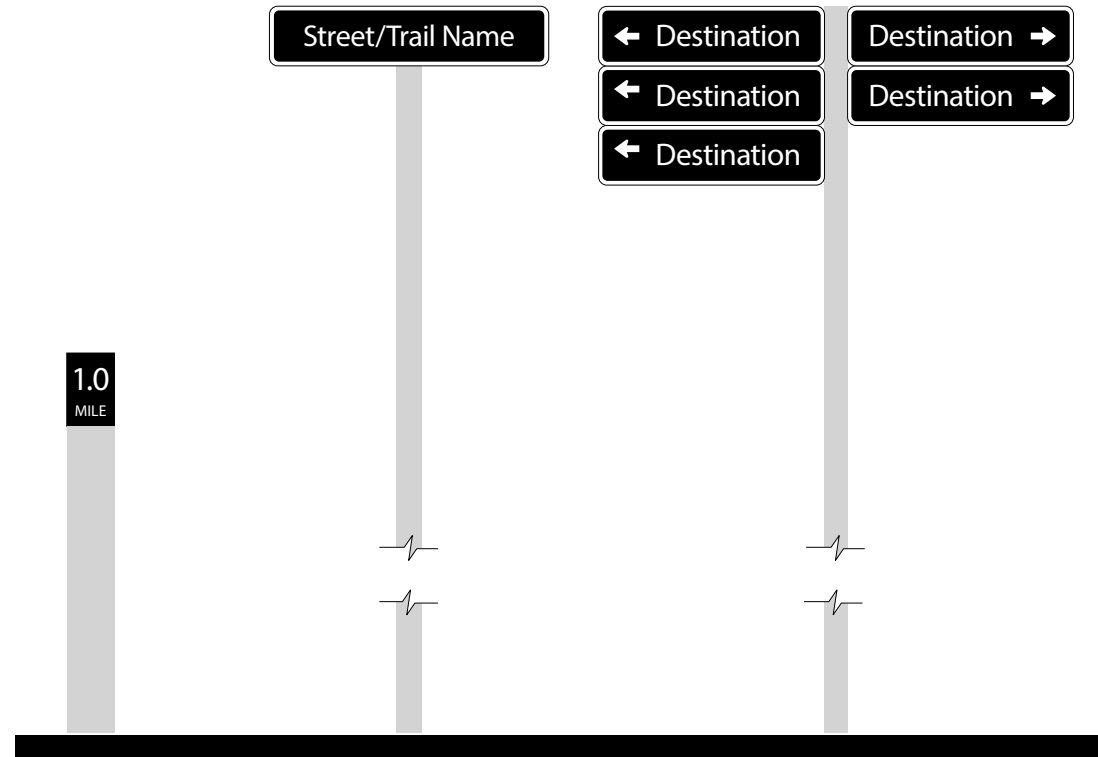
Confirmation

Placed after a turn or intersection to reassure users that they are on the correct route.

Turn

Placed before a turn or intersection to help users stay on the designated route.

ENHANCED NAVIGATIONAL ELEMENTS

***Mile marker***

Reinforces branding and orients users along trails.

Intersection

Orients trail users at street crossings and informs vehicular traffic of trail crossings.

Fingerboard

Clarifies route options where two or more routes converge.

ACCESS ELEMENTS

Access elements guide users a wayfinding system either by marking physical entry to trails, or other facilities, or by providing information to new or potential users in a clear and understandable way. Access elements can include gateway monuments, information kiosks, and secondary access signage. Note that it may be possible to combine multiple access elements in some cases; or, for instance, kiosks may serve the purpose of gateway monuments, and vice versa.

Gateway Monuments

Gateways define the entry into a distinct place with a defined identity. They are the first communication and introduction to a physical place, issuing a feeling of arrival. Gateways can be scaled for pedestrian or vehicular experiences.

Information Kiosks

Kiosks that include area or regional maps provide helpful navigational information, especially where users may be stopping long enough to digest more information such as at trailheads. Kiosks should be located in conspicuous areas along the primary route from parking areas to the trail. Sufficient space should be provided around the kiosk to allow people to observe the information without obstructing adjacent walkways.

Secondary Access Signage

Secondary access points with limited parking, services, or user traffic may not necessitate the same level of information and signage as formal access points with greater use. Signage at these locations may vary from a simple confirmation sign stating the name of the trail to a scaled down trailhead kiosk complete with user map, rules and regulations, permitted and restricted uses, and destination information.



Information kiosk in Joshua Tree National Park.
Photo credit: NPS

FUNDAMENTAL NAVIGATIONAL ELEMENTS

Fundamental navigational elements guide visitors to their destinations along designated facilities. These fundamental elements include decision signs, confirmation signs, and turn signs.

Decision signs

Decision signs mark and are placed prior to the junction of two or trails. These signs inform users how to access nearby destinations. These signs include destinations that can be paired with distances in time and/or mileage, and arrows.

Confirmation signs

Confirmation signs identify designated routes. This builds confidence that the user is on the correct route. Confirmation signs are an integral component of any trail that crosses roads, changes direction, and has intermediate access points between trail or route beginning or end.

Turn Signs

Turn signs indicate where a route turns from one trail onto another. Turn signs are at key points of navigation for users, such as trail intersections.



Decision signage in the Auburn State Recreation Area. Photo credit: FoothillHikers, Wikiloc

ENHANCED NAVIGATIONAL ELEMENTS

Enhanced navigational elements provide additional wayfinding assistance beyond fundamental signage, improving the user experience and providing more opportunities for branding and identity. Enhanced navigational elements could include mile markers, intersection signs, and fingerboard signs.

Mile markers

Mile markers are a series of numbered markers that may be placed alongside a trail at defined intervals to help users understand how far they have gone, and how far they have to go to their next destination. Furthermore, mile markers provide pathway managers and emergency response personnel points of reference to identify field issues such as maintenance needs or locations of emergency events. Mile marker locations should be geo-located and supplied to emergency responders so that responders can efficiently respond to incidents on the trail. Area branding, path name, and distance information in miles may be included as well as jurisdiction identification. It is important that mile

markers are spaced at consistent intervals, such as every 1/4 to 1/2 mile, along a pathway network. Point zero should begin at the southernmost and/or westernmost terminus points of a route.

Intersection signs

Intersection signs orient trail users to which street they are crossing. Signage at intersections facing motorists can bring attention to a trail crossing.

Fingerboard signs

Fingerboard signs serve a purpose similar to decision signs in that they provide wayfinding to multiple destinations located in multiple directions from the junction at which the sign is located. They provide an efficient way to give direction at a junction that is approached from multiple angles, and are not as limited in the amount of destinations that can be included.



Mile markers/trail signage in Eldorado National Forest. Photo credit: hikerhustle.com

Trails Delineation

Trail delineation has been an ongoing problem in the Buttermilk Project Area (page 67). The social trails leading to the Buttermilk Boulders have destroyed vegetation, and without trail delineation these trails continue to widen. Creating policies and regulations to prevent trail widening and trail creation as well as physical infrastructure to close sensitive areas can protect the plants and wildlife near the boulders.

POTENTIAL TRAIL ACTIONS

- ◆ Work with ESIA to encourage continued identification of social trails in the BIRPI Project Area.
- ◆ After a formal USFS trail system has been established, create maps to be posted online and placed in future welcome center/kiosk areas which show the preferred trail network and access points to reach popular boulders. Include directions to OHV trails on these maps. Include educational information that shows visitors the damage that walking outside of trails can cause.
- ◆ Depending on funding availability, delineate existing trails with various materials. Lower cost materials like large rocks can blend in with the environment but can be easily moved or stepped over, and require manpower to haul rocks from the road. Materials like fencing can permanently delineate the trail but are higher cost to implement and may affect the natural landscape view of the area. Vegetation can also be used to delineate trails. Only native vegetation should be planted, and considerations for the vegetation's sunlight and water needs should be made before planting.
- ◆ Well-used trails should be reinforced with materials like gravel to reduce erosion and route runoff away from the trail.
- ◆ Signage should be installed near sensitive areas prohibiting access. This action would be most effective with regular monitoring by rangers to cite violators.
- ◆ Identify one trail route to each boulder. Consolidate trails that run parallel to each other and eliminate access to duplicate trails that lead to the same destination. For lightly used social trails, techniques like raking the land and scattering rocks and debris can discourage other visitors from following the social trail.
- ◆ For more heavily used social trails, access can be eliminated or limited through the use of large rocks or boulders, fencing, or gates. Small objects like rocks should not be used to close trail access, as it can result in visitors walking around the objects, further damaging the area.
- ◆ Identify any popular areas that do not currently have trail access and create trails to them. Creation of trails should be as constrained and infrequent as possible to minimize impacts to plants and wildlife. Studies should be conducted prior to any trail creation to ensure habitats are not severed and vegetation is not damaged.
- ◆ Prepare for maintenance needs. Even with careful trail delineation, trails will need maintenance over time. This maintenance should be considered and scheduled regularly, rather than only conducting maintenance after the trail is already damaged.
- ◆ Focus on trails in the primary boulder field and preserve and delineate access to the most popular areas, such as the Pollen Grains and Beehive.

NEW TRAILS

Formalizing a new trail network may help in encouraging visitors to stay on trails and can help visitors reach recreational destinations without needing to walk through vegetation. A loop trail can connect visitors to the bouldering area in Buttermilk Country and a Tungsten Hills Trail will connect to existing USFS trails in the area. Figure 7 shows these potential new trails.

SOCIAL TRAILS AT THE BUTTERMILK BOULDERS

Figure 8 shows the web of well-used existing social trails at the Buttermilk Boulders. Climbing rangers have worked to delineate these trail networks to prevent new trails from being formed. While future studies will need to be completed to determine which of these trails can safely be eliminated or condensed, the figure shows examples of trails that may be redundant and could be candidates for permanent closure.

TRAIL DELINEATION RESOURCES

Refer to resources such as the [American Trails Guidance for Managing Informal Trails](#) report, and the [Rails to Trails Conservancy Developing Trails in Sensitive Areas](#) guidance.



Figure 7. Buttermilk Project Area



BUTTERMILK PROJECT AREA

Legend

Boundaries

— Buttermilk Project Area

Primary Land Managers

BLM

LADWP

USFS

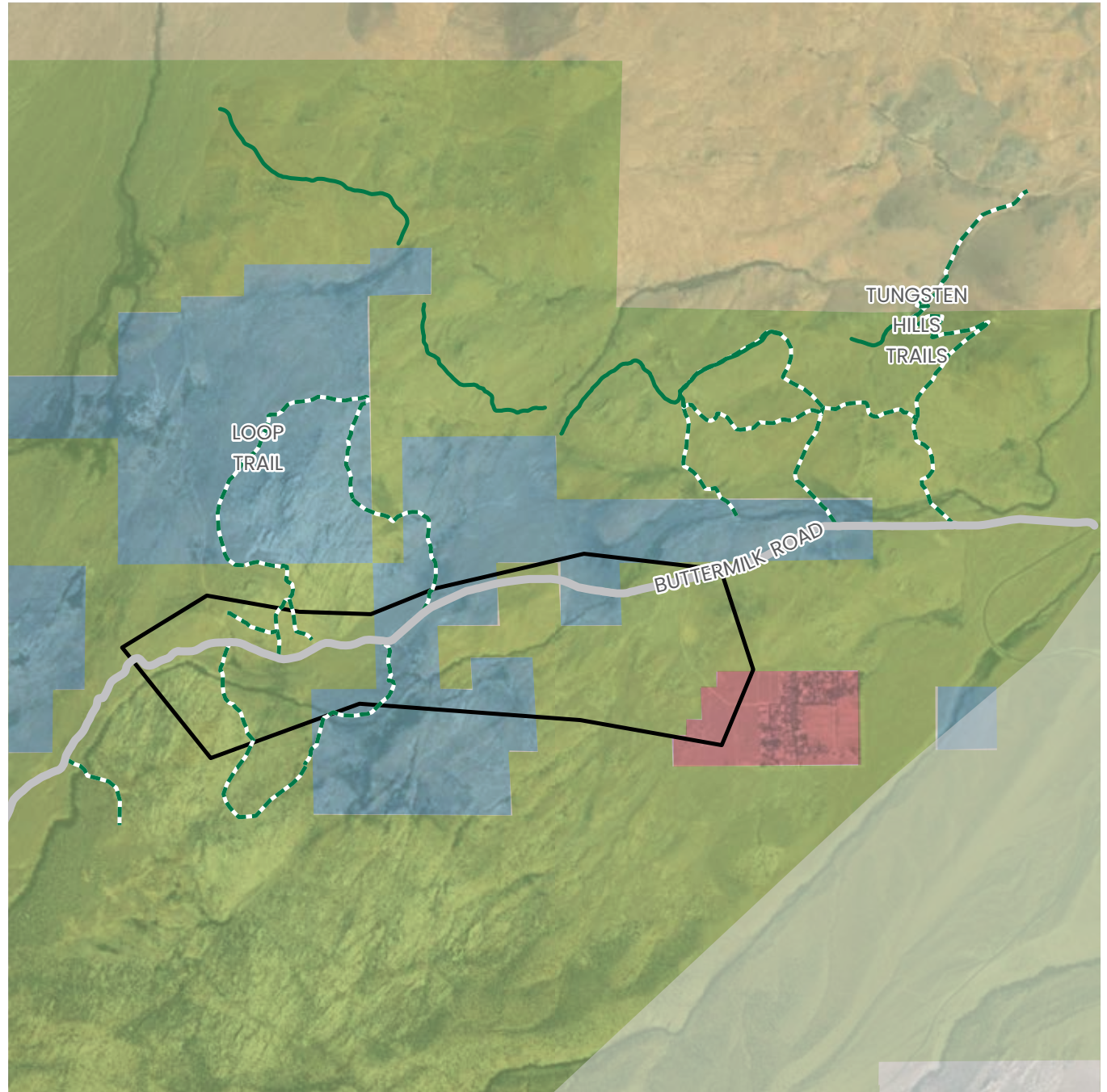
C.A. Fish and Wildlife

Unincorporated Inyo County
Private Land

Trails

Existing USFS Trails

Suggested Trails



alta

0 0.35 0.7 MILES



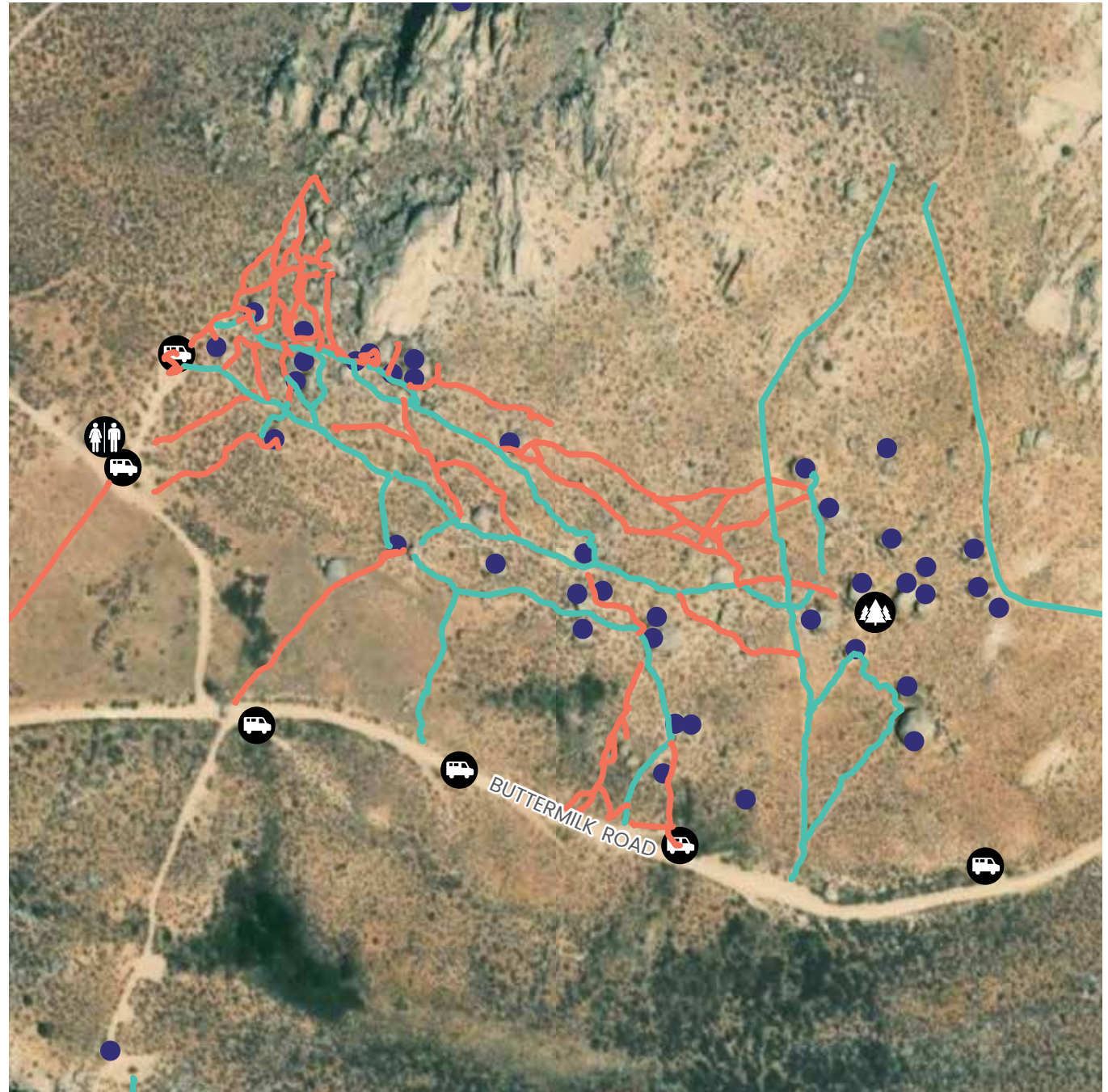
Figure 8. Buttermilk Boulders and Social Trails



BUTTERMILK PROJECT AREA

Legend

- Boulders
- Preferred Social Trails
 - No
 - Yes
- 🏔 Climbing Area
- 🚗 Popular Parking Area
- 🚻 Existing Toilet



alta

0 0.03 0.05 MILES



Case Studies

The following case studies provide examples of recreational areas with multiple landowners that have worked to create a collaborative organization. These case studies show different techniques for creating an area management plan and show the effect these collaborate management plans have had on the recreational areas.



Mobius Arch in Alabama Hills.
Photo Credit: Jesse Pluim, BLM

Alabama Hills Management Plan¹

Located at the base of the Sierra Nevada in Owens Valley, the Alabama Hills are a formation of rocks and eroded hills spanning over 29,000 acres of public land. In addition to dispersed camping, rock climbing, horseback riding, and mountain biking, the area is popular for television and movie filming, as well as its natural arches and wildflower fields. The area sees more than 150,000 visitors each year and experienced a record number of visitors in 2021.

In 1969, BLM took over management of the Alabama Hills and in 2019, the area became a National Scenic Area to gain protection of its resources. The BLM adopted the Alabama Hills Management Plan (2021) to gain further protection of the area while providing recreational opportunities, minimizing user conflicts, addressing

health and safety concerns, reducing impacts, and enhancing other resources within the Alabama Hills. The Plan includes standards for uses and camping, outlined objectives for restoring biological resources, and addressed commercial concerns such as livestock grazing. In creating the Plan, the BLM partnered with the Alabama Hills Stewardship Group (AHSG), Lone Pine Paiute-Shoshone Tribe, City of Los Angeles Department of Water and Power, Inyo County, and the Lone Pine community.

Today, the BLM's long-standing partnership with AHSG and Eastern Sierra Interpretive Association regularly conducts activities in pursuit of the Plan's goals, including planting native plants, relocating and removing fire rings, removing graffiti, brushing off-road tire tracks, and picking up trash. The partnership has also resulted in the restoration of over 100 different locations within the Hills and the consolidation of camping into 50 designated campsites.

¹ https://eplanning.blm.gov/public_projects/1502669/200347583/20033290/250039489/Alabama%20Hills%20Management%20Plan%20Final%20January%202021.pdf

The Eastern Sierra Recreation Collaborative (ESRC)

The [Eastern Sierra Recreation Collaborative \(ESRC\)](#), initiated, convened, and facilitated by MLTPA from 2014 through 2016, was a grass roots effort that provided public outreach and public engagement opportunities to inform the first management plan update for the Inyo National Forest in over 20 years. Its purpose was to enhance sustainable and regional recreation opportunities through focused engagement and collaboration between recreationists and the gateway communities of the Eastern Sierra.

Starting in 2015, the ESRC held a series of public forums to gather community input and guidance on how the Inyo National Forest could best support recreation through its Management Plan. Participants represented interests from nine Inyo National Forest and Eastern Sierra gateway communities along the Highway 395 corridor as well as institutional, government, conservation, and recreation user groups. The resulting document, “The Eastern Sierra Recreation Collaborative Proposed Recreation Strategy”, addressed a range of required

management and planning issues for the Inyo National Forest Management Plan Revision process through the “lens” of sustainable recreation. The strategy details desired conditions, objectives, standards, and guidelines as they relate to the ESRC’s recreation values as generated by extensive community input.

In 2016, the ESRC received a grant from the National Forest Foundation to refine and develop the initial inventory of desired conditions as part of the Inyo National Forest’s Management Plan. Following public meetings to gather input from the Bishop, Lone Pine, and June Lake communities, the “Eastern Sierra Recreation Collaborative: ‘Citizen Suggested Desired Conditions’” document provided a framework and specific recommendations for sustainable recreation programs in the Eastern Sierra that would be implementable and encourage stewardship opportunities. The report includes revised management approaches for achieving each desired condition, as well as potential standards for consideration by the Inyo National Forest. Many of the ESRC’s recommendations were incorporated into the final Inyo National Forest Management Plan through the final Record of Decision signed by Forest Supervisor Tammy Randall-Parker in October of 2019.



*The Eastern Sierra from Highway 395.
Photo Credit: Sunset Magazine*

The Sherwins Area Recreation Plan (SHARP)²

The Sherwins, immediately south of the town of Mammoth Lakes, is a diverse, high-desert landscape featuring the Sherwins Range, Mammoth Rock, Hidden Lake, Panorama Dome, Solitude Canyon, and the Mammoth Meadow, that offers “close in” opportunities to explore native forests, wetlands, bodies of water, and wildlife. Between 2009 and 2010, the Sherwins Working Group developed the [Sherwins Area Recreation Plan \(SHARP\)](https://www.townofmammothlakes.ca.gov/DocumentCenter/View/2054/SHARP-Report?bidid=) to provide recreation development and management recommendations for the Sherwins in response to increasing user conflicts.

The Sherwins Working Group was a citizen-based collaborative planning effort formed at the invitation of regional partners, including the Inyo National Forest, the Town of Mammoth Lakes, and the Mammoth Lakes Trails and Public Access Foundation, or MLTPA. Participants represented varied recreation interests and activities, along with private property and commercial interests, all sharing a

² <https://www.townofmammothlakes.ca.gov/DocumentCenter/View/2054/SHARP-Report?bidid=>

common acknowledgment of the increasing and future use of the Sherwins along with concerns for the landscape’s health and well-being. The Sherwins Working Group was open to any and all interested participants, with an overriding intent to speak for and represent all interests whether present in spirit or in person.

SHARP was intended to serve as a resource document for the Forest Service, the Town of Mammoth Lakes, private property and real estate development interests, and any other effort with an interest in trails and recreation infrastructure development in the Sherwins region. It included detailed recommendations as well as other concepts that were expected to require additional planning and study. SHARP was included as part of the Town of Mammoth Lakes Trail System Master Plan and its formal adoption by the Town in 2011, including a programmatic environmental analysis.

Eldorado National Forest

Located in the central Sierra Nevada mountain range and spanning across five counties and the California/Nevada state line, the Eldorado National Forest is a 600,000-acre



Signage in the Sherwins Area.

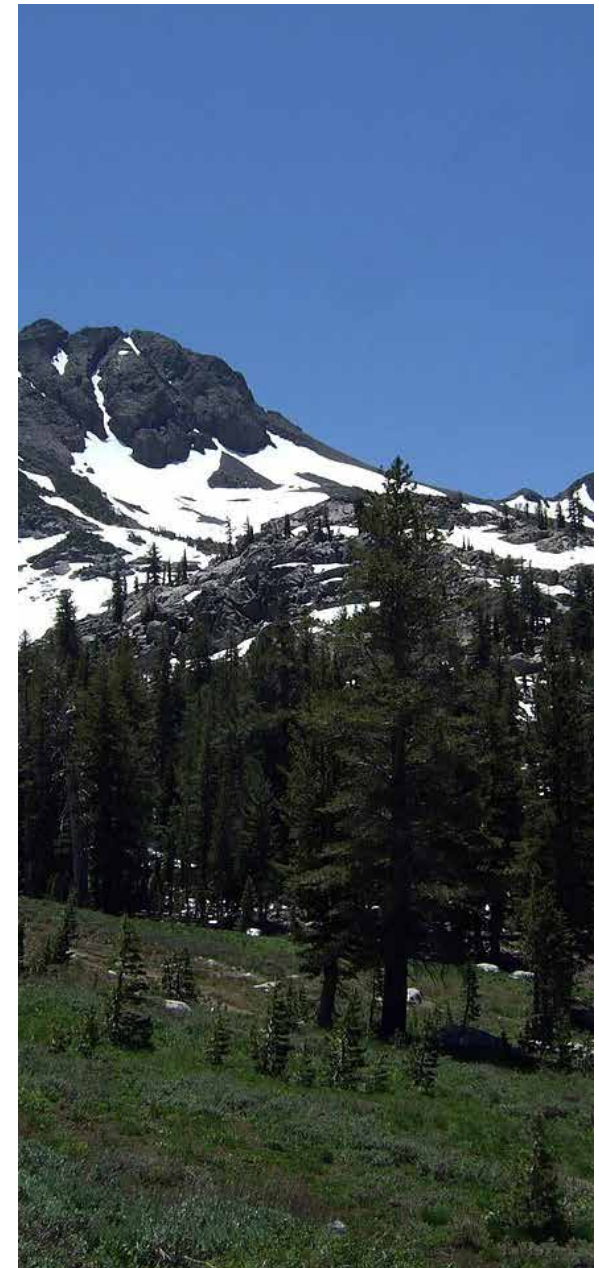
forest with numerous rivers and lakes for fishing, mountains and meadows for skiing, campsites and picnic areas, and diverse forests. It also features four hundred miles of hiking trails open to hikers, cyclists, and equestrian uses, and over 70 day use and overnight developed recreation facilities.

The Eldorado National Forest, governed by the USFS, has a complicated landownership pattern. The Forest contains about 790,000 gross acres of land, with 190,000 of those acres owned by entities outside of the Forest Service. Intermingled parcels tend to be isolated and enclosed by government land. Outside the administrative boundary, several small areas of National Forest land are separate from the main body of the Eldorado and are surrounded by private property.

As the area urbanized, contrasting land philosophies grew, with conflicts affecting the abilities of both government managers and private parties to develop their land as they might prefer. In response, the Forest Service adopted the Eldorado National Forest Land Management Plan (1989)³ to establish the primary management direction for the entire forest. Part of the Plan included possible resolutions to this management issue such as a land adjustment program, coordinated land management planning with local counties, and consolidation of interior ownership and establishing future land patterns to facilitate long-term management of the Forest.

Since the Plan's adoption, there have been several amendments to the Plan, including a Conservation Covenant amendment for the acquisition of three parcels of land for outdoor recreation, sustainable forestry, biological and cultural resource protection, and grazing enhancement purposes.

As part of this acquisition, the Pacific Forest and Watershed Lands Stewardship Council – comprised of representatives from state and federal agencies, water districts, tribal and rural interests, forest and farm industry groups, conservation organizations, the California Public Utilities Commission, and Pacific Gas and Electric Company – was tasked with preparing a Land Conservation Plan. This Land Conservation Plan (2020) establishes a framework for the conservation and/or enhancement of these lands and ensures the permanent protection of these lands.



Eldorado National Forest. Photo Credit: Sebastian Werner

³ <https://www.fs.usda.gov/detail/eldorado/landmanagement/planning/?cid=fseprd528612>

Auburn State Recreation Area (SRA)

The Auburn SRA is a 40-mile long park along the American River in Northern California with over 900,000 visitors a year. Major recreational uses in the Auburn SRA include hiking, camping, mountain biking, fishing, and boating. There are also equestrian/horseback riding trails and areas for off-highway motorcycle riding. The Auburn SRA is largely comprised of federal lands, with the California State Parks administering the area under a Managing Partnership Agreement (MPA) with the US Bureau of Reclamation (Reclamation) since 1977.

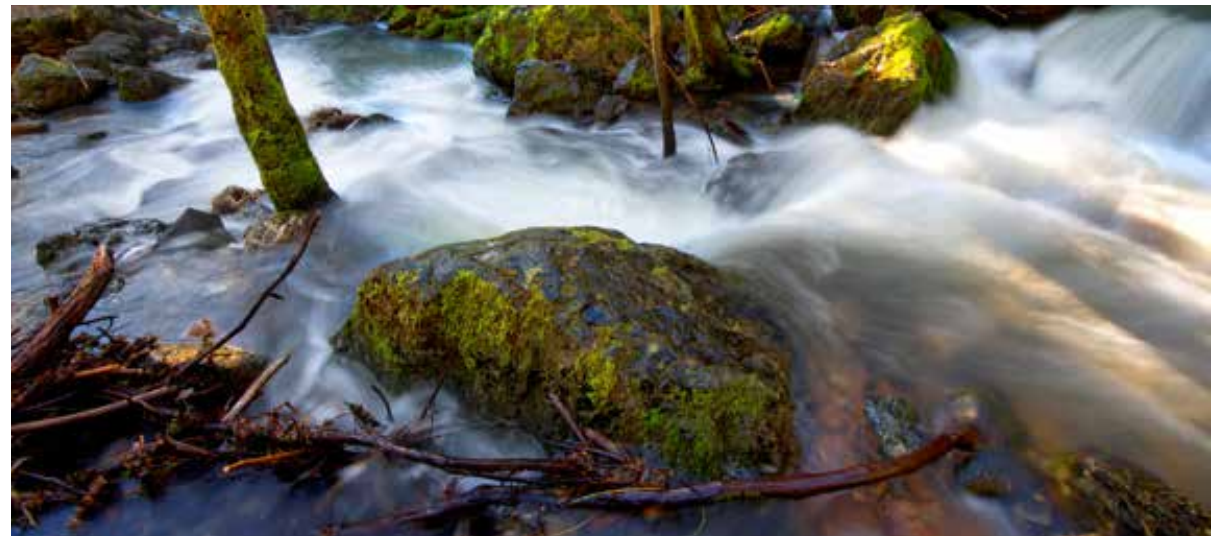
In 2012, State Parks and Reclamation entered into a 25-year MPA for the federal lands at Auburn SRA, as well as Folsom Lake SRA and the Folsom Powerhouse State Historic Park. The MPA specifies management roles and responsibilities for each agency, such as Reclamation's responsibility of the protection of natural resources on federal property, and a cost-share agreement, which states that Reclamation will enter into a Financial Assistance Program with State Parks when operation and maintenance costs exceed revenues. The MPA also requires Reclamation and State

Parks to convene annually to review and inspect the project areas for compliance with the MPA.

This includes ensuring administration, operation, maintenance, and development procedures are adequate; identifying and correcting deficiencies and problems; and ensuring management of the project areas are in accordance with the MPA. State Parks and Reclamation subsequently adopted the Auburn

SRA General Plan (2021)⁴ to establish a long-range vision, goals, and guidelines for park management. It also provides direction on future recreation opportunities, resource management, historic sites, visitor facilities, park improvements, services, and programs.

⁴ https://www.parks.ca.gov/?page_id=24325



Auburn State Recreation Area. Photo Credit: California State Parks

Friends of Joshua Tree (FOJT)

Established as a national park in 1994, Joshua Tree National Park (JTNP) encompasses nearly 800,000 acres of desert land across the counties of Riverside and San Bernardino in Southern California. JTNP is home to a variety of delicate plant, reptile, mammal, and bird species, and features a paleontological area, over 700 archaeological sites and 19 cultural landscapes. It is a popular destination to hike and camp, with 191 miles of hiking trails, 93 miles of paved and 106 miles of unpaved roads, 9 campgrounds, and 10 picnic areas. The Park also has three entrance stations, three visitor centers and a nature center.

JTNP has long held a reputation as being a world-class climbing destination. By the 1990s, however, the need for a private, non-profit entity to manage issues like conservation and maintenance, and how these issues relate to climbers' access, became apparent. In 1991, a group of local climbers formed Friends of Joshua Tree (FOJT) to address these issues and represent climbers' interests in JTNP.

Today, FOJT continues its tradition of advocating, communicating, and encouraging ethical and environmentally sound climbing practices. FOJT accomplishes this through several focus areas:

1. National park liaison – Through ongoing collaborations with the National Park Service (NPS), FOJT has played a pivotal role in the Backcountry and Wilderness Management Plan (2000) and the Joshua Tree National Park Climbing Management Plan (forthcoming).
2. Trail restoration – FOJT works with the Access Fund and NPS to establish and maintain trails in JTNP and organizes a volunteer corps several times a year to improve trails and damaged or sensitive areas.
3. Climbing stewards – A cooperative agreement with JTNP hosts several in-season, full-time stewards who reside in the Park and provide information about climbing, bouldering, slacklining, and park regulations to visitors. Climbing stewards also conduct patrols, report graffiti, and help maintain cleanliness.
4. Park improvements – FOJT provides input on issues such as automobile parking, user trails and environmental impact, and Park preservation. FOJT also works with climbers to educate them on important park matters through events, slideshows, public gatherings, and town hall meetings.
5. Community relations – FOJT regularly engages with the local Joshua Tree business community, advocacy network, and tribal leadership through collaborations, meetings, and events.
6. Fixed anchor replacement – FOJT supports anchor replacement with gear and funds for creating modern bolts, chains, anchors, and hangers.
7. Climber Coffee – On weekends during the climbing season, FOJT hosts “Climber Coffee” as a way of increasing engagement between visitors and climbing rangers.



Joshua Tree National Park. Photo Credit: Jarek Tuszyński

Climbing Area Precedents

Similar climbing destinations around the country have experienced many of the same issues as the Buttermilk Project Area and have addressed them in unique and creative ways. The following examples are of climbing destinations that have been able to begin to address many of the issues and could provide valuable insight into some of the strategies that should be adopted in the Buttermilk Project Area. Many of the problems at these similar climbing destinations had to do with crowds exceeding the built capacity of the climbing area. By formalizing the visitor experience through permits and built out facilities implemented by a governing body, many of the problems have been addressed.



Horse Pens 40, AL¹

Horse Pens 40 has incorporated into an official park with user fees and camping facilities. The standard fee is \$11 per day and \$22 per night for primitive camping at formalized sites. Fires are limited to existing fire pits. Horse Pens is also one of the sites of the Triple Crown of Bouldering Series.

Hueco Tanks, TX²

An incorporated park outside of El Paso, TX, Hueco Tanks has become one of the premier climbing destinations in the world due to the unique huecos in the rock. Climbers must call the Texas State Park Ranger to make a reservation beforehand and pay \$7 per day. All climbers must also check in at the booth beforehand and watch a welcome video. There is a campground with restrooms, showers and a dump station, and reservations are limited to 3 days. The park also offers guided tours of the parks to see the cultural sites, natural views, and climbing guides.

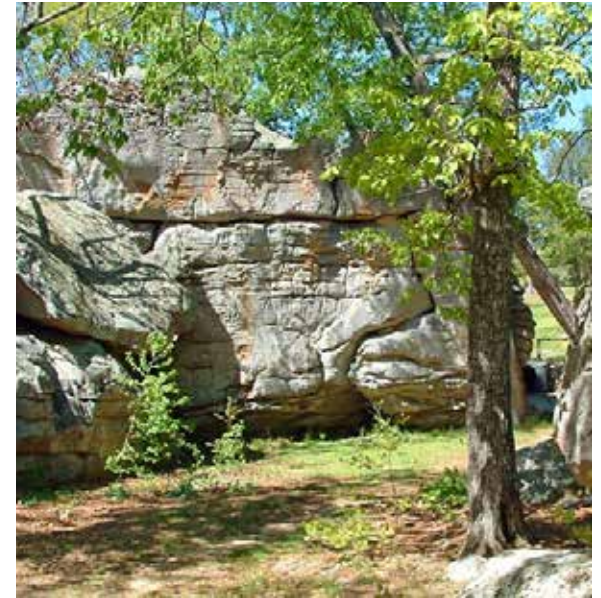
¹ www.hp40.com

² <https://tpwd.texas.gov/state-parks/hueco-tanks/activities>

Stone Fort, TN³

Stone Fort is a popular climbing area that has recently become under the management of a local climbers coalition and the Southeastern Climbers Coalition. The park charges \$9 a day for a pass. Passes are purchased at the clubhouse before entering the park. The clubhouse offers facilities for climbers including restrooms and food. There is no camping on the property. Stone Fort is one of the sites of the Triple Crown of Bouldering Series.

³ <https://www.stoneforttn.com/>



Horse Pens 40.
Photo Credit: Horse Pens 40



Climbing in Hueco Tanks, TX. Photo Credit: TopRock Climbing

Joe's Valley, UT⁴

Joe's Valley has undergone similar development and growing pains as the Buttermilk Project Area. Two campgrounds have been established within the climbing area with vault toilets and trash receptacles. There are also more robust campsites nearby at the reservoir. The nearby town of Orangeville has also developed to accommodate climbers with showers, restaurants, and campgrounds. The Joe's Valley Climbing Festival has been instrumental in raising funds and partnerships to manage the land and create relationships between locals and the visiting climbers.



Joe's Valley Climbing Festival. Photo Credit: Martha Samokhvalova, Joe's Valley Fest

New River Gorge, WV⁵

The New River Gorge is a sport climbing area managed by the National Park Service. Campgrounds are first come, first served. Backcountry camping is only allowed by permit and after meeting with a ranger. There are facilities including bathrooms, trash collection, and picnic areas throughout the park.



Rock climbing in New River Gorge. Photo Credit: ACE Adventure Resort

⁴ <https://www.fs.usda.gov/recrea/mantilasal/recrea/?recid=73twelve8>

⁵ <https://nps.gov/neri/index.htm>

A blue-tinted landscape photograph of a desert. In the foreground, there are several large, smooth boulders scattered across a sandy and rocky terrain. The middle ground shows a vast, open plain with sparse, low-lying vegetation. In the background, there are rolling hills and mountains under a sky filled with soft, white clouds. The overall scene is serene and expansive.

Appendix A: Funding Sources

Funding

To implement many of the alternatives and actions in this document, funds will need to be raised by the management organization. Sources such as sponsorships and partnerships with local gyms and competitions/ festivals, day pass fees, camping and parking fees, as well as fundraising from the landowners should be considered. National, state, and local grants are also opportunities for funding sources.



Funding Sources

FUNDING SOURCE	DESCRIPTION
Access Fund Climbing Preservation Grant Program	<p>Since its inception in 1991, Access Fund has funded over \$1.4 million to local organizations, climbers, and public agencies. Access Fund provides funding for projects that demonstrate local climber support, collaboration with land managers, and a commitment to long-term change. Most grant requests range from \$1,000 to \$4,000, but Access Fund considers requests for over \$10,000 if the projects should have national significance and use a high degree of matching funds.</p> <p>Grant applications are reviewed in two cycles each year.</p>
Federal Lands Programs	<p>Both the Federal Lands Access Program (FLAP) and the Federal Lands Transportation Program (FLTP) provide funds for use on Federal Lands Transportation Facilities (FLTFs). FLTFs include public roads, trails, highways, bridges, and transit systems. Eligible activities include transportation planning, research, engineering, preventive maintenance, rehabilitation, restoration, construction, and reconstruction of FLTFs located on or adjacent to, or providing access to, federal lands and adjacent vehicular parking areas, among other activities.</p> <p>The FLAP authorized \$322.76 million to the State of California in fiscal year 2022. For fiscal year 2020, the FLTP awarded \$375 million in funds, distributed among several Federal Land Management Agency partners including the National Park Service, USDA Forest Service, and Bureau of Land Management.</p>

FUNDING SOURCE	DESCRIPTION
Forest Service Great American Outdoors Act (GAOA)	<p>Enacted into law in 2020, the GAOA continues to provide new opportunities for the USDA Forest Service to deliver benefits to the American public through major investments in infrastructure, recreation facilities, public lands access, and land and water conservation. The GAOA established the National Parks and Public Land Legacy Restoration Fund to address the deferred maintenance backlog for 5 federal agencies and provided permanent full funding for the Land and Water Conservation Fund.</p> <p>The Legacy Restoration Fund is authorized for up to \$1.9 billion each year, of which the Forest Service receives 15 percent. The funding cycle through 2025 has been completed. GAOA will only continue to be a funding option if the law is reauthorized and additional funding is allocated for 2026 and beyond.</p>
Habitat Conservation Fund (HCF)	<p>The HCF allocates approximately \$2 million each year to seven unique categories. Eligible projects include nature interpretation programs to bring urban residents into park and wildlife areas, protection of various plant and animal species, and acquisition and development of wildlife corridors and trails.</p> <p>The HCF is administered by the State of California Department of Parks and Recreation. The next anticipated application due date is June 2025.</p>
Inyo County Community Project Sponsorship Program (CPSP)	<p>The CPSP funds projects, programs, and events undertaken by non-profit organizations in Inyo County. Competitive grants are available for projects that provide recreational or cultural enrichment to the community, or projects that enhance visitation to the community.</p> <p>Grant applications are accepted each fall, with the amount of funding available for CPSP based on the County Budget. For the 2024 grant cycle, this amount was \$40,000.</p>

FUNDING SOURCE	DESCRIPTION
Legacy Trails Program	<p>Administered by American Trails, this program provides up to \$100,000 for projects that restore, protect, and maintain watersheds in national forests and grasslands. Eligible projects also include those that improve trail resiliency and trailhead access, protect endangered species, and provide emergency access like evacuation routes. Projects should engage a significant number of volunteers, have local investment, and benefit the public. Agencies that apply must have a formal written agreement with their local Forest Service Office.</p>
National Forest Foundation (NFF) Matching Awards Program (MAP)	<p>Through MAP, the NFF provides funds for projects that directly benefit America's National Forests and Grasslands. MAP pairs federal funds provided through a cooperative agreement with the Forest Service with non-federal dollars raised by award recipients, multiplying the resources available to benefit the National Forest System. The NFF requires that all projects proposed for funding must include community involvement and hands-on stewardship activities to benefit the National Forest System. There is no specific minimum or maximum award amount, though NFF mainly considers requests ranging from \$5,000 to \$35,000.</p>
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants	<p>Previously known as BUILD and TIGER Discretionary Grants, the RAISE program enables the Department of Transportation to invest in road, rail, transit, and port projects that have a significant local or regional impact. While the potential solutions included in this Initiative may not be eligible due to their small scale, a major capital improvement, such as significant road or trail improvements in the area, may qualify.</p> <p>RAISE grants are awarded on a competitive basis, providing \$1.5 billion annually for fiscal years 2022–2026. The deadline for fiscal year 2024 is February 28, 2024. The deadline for fiscal year 2025 will be January 13, 2025.</p>

FUNDING SOURCE	DESCRIPTION
Recreational Trails Program (RTP)	<p>For trails that are primarily recreational in nature, the RTP provides funding to states. These funds can be used for trails with a variety of purposes including hiking, biking, equestrian use, and off-road motorized vehicles. This program funds trail and trailhead maintenance and restoration, construction of new trails, and safety and educational programming for trail users.</p> <p>The RTP is administered by the California Department of Parks and Recreation.</p>
Road Maintenance and Rehabilitation Program (RMRP)	<p>Senate Bill 1 created the Road Maintenance and Rehabilitation Program (RMRP) to address deferred maintenance on state highways and local road systems. Program funds can be spent on both design and construction efforts.</p> <p>Funds are programmed by the State Controller's Office with guidance from the California Transportation Commission.</p>
Surface Transportation Block Grant Program (STBG)	<p>The STBG provides flexible funding that may be used by states and localities for smaller-scale projects to preserve and improve the conditions and performance on any federal-aid highway, pedestrian and bicycle infrastructure, and transit capital projects. Recreational trails projects are eligible under the STBG, including the maintenance and restoration of existing recreational trails.</p> <p>Estimated annual STBG funding for fiscal years 2022–2026 is about \$14.5 billion. The Bipartisan Infrastructure Law directs the Federal Highway Administration to apportion this funding as a lump sum for each state, which is then divided among apportioned programs. Each state's apportionment is calculated based on a percentage specified in law.</p>

FUNDING SOURCE	DESCRIPTION
<p>Trails Capacity Program</p>	<p>Established in 2022 by American Trails, the Trails Capacity Program supports partners from all nonmotorized and motorized trail user groups. Projects may include trail research, stewardship, and maintenance projects that are inclusive, engaging, educational, and foster improved trail user behavior. The Program is open to projects along public trails on public or private land across the country. Though the Program focuses on state and local lands, projects on federal land are accepted.</p> <p>Applications open in fall, with awards made in the following spring. Grant amounts range from a minimum of \$5,000 to a maximum of \$10,000.</p>
<p>Vibrant Recreation and Tourism Grant</p>	<p>The Vibrant Recreation and Tourism regional goal, part of the Sierra Nevada Conservancy's (SNC) Strategic Plan, aims to enhance, promote, and develop sustainable recreation and tourism opportunities in our service area. SNC accordingly administers the Vibrant Recreation and Tourism Directed Grant Program to support planning and implementation efforts to enhance and develop sustainable recreation and tourism opportunities and increase access to public lands.</p> <p>Future funding allocations are yet to be determined; as additional funding allocations become available, the SNC may direct those allocations to support the Vibrant Recreation and Tourism Grant.</p>



A blue-tinted landscape photograph of a desert. In the foreground, there are several large, smooth boulders scattered across a sandy and rocky terrain with sparse, low-lying vegetation. In the background, there are rolling hills and mountains under a sky with scattered white clouds. The entire image has a uniform blue color cast.

Appendix B: Community Feedback

Community Feedback Tables

The following tables show the number of positive and negative comment each alternative received during Workshop 2. The table also shows the number of participants that marked the challenge as in their top 3 most important category that needs to be addressed in the Buttermilk Project Area.

MANAGEMENT

	ONLINE COMMENT BOX	JOIN EXISTING COMMITTEE	SHARED MANAGEMENT	IN TOP 3 CONCERNS
POSITIVE COMMENTS	7	7	23	4
NEGATIVE COMMENTS	0	0	0	
TOTAL COMMENTS	7	7	7	

BUTTERMILK ROAD

	CONSISTENT GRADING/DRAINAGE	MAINTENANCE PLAN	NORTHERN ROUTE	PAVED ROUTE	SHUTTLE SERVICE	IN TOP 3 CONCERNS
POSITIVE COMMENTS	17	29	2	14	8	10
NEGATIVE COMMENTS	0	1	10	19	8	
TOTAL COMMENTS	17	30	12	33	16	

CAMPING

	CAMPING BAN	CAMPING PERMIT	DEVELOPED CAMPSITE	PRIMITIVE CAMPSITE	REQUIRE CAMPSITE USE	IN TOP 3 CONCERNS
POSITIVE COMMENTS	2	18	19	26	15	12
NEGATIVE COMMENTS	3	12	8	3	4	
TOTAL COMMENTS	5	30	27	29	19	

CLIMBING RANGERS

	HIRE MORE RANGERS	KIOSK/ WELCOME CENTER	VOLUNTEERS	IN TOP 3 CONCERNS
POSITIVE COMMENTS	22	25	24	8
NEGATIVE COMMENTS	3	1	0	
TOTAL COMMENTS	25	26	24	

EDUCATION

	ROBUST EDUCATION	SIMPLE EDUCATION	VISITOR'S PERMITS	IN TOP 3 CONCERNS
POSITIVE COMMENTS	25	38	18	12
NEGATIVE COMMENTS	3	0	4	
TOTAL COMMENTS	28	38	22	

HABITAT DESTRUCTION

	BAN OHVS	IMPROVE TRAIL NETWORK	INFRASTRUCTURE AND SIGNAGE	IN TOP 3 CONCERNS
POSITIVE COMMENTS	18	12	28	10
NEGATIVE COMMENTS	4	2	1	
TOTAL COMMENTS	22	14	29	

MAINTENANCE AND STAFFING

	ADDITIONAL FACILITIES	MORE EDUCATION	LAW ENFORCEMENT	VOLUNTEERS	IN TOP 3 CONCERNS
POSITIVE COMMENTS	11	21	24	26	3
NEGATIVE COMMENTS	3	0	6	0	
TOTAL COMMENTS	14	21	30	26	

OVERCROWDING

	INFRASTRUCTURE IMPROVEMENTS	PERMIT SYSTEM	PARKING AND CAMPING AREAS	IN TOP 3 CONCERNS
POSITIVE COMMENTS	14	15	21	6
NEGATIVE COMMENTS	2	11	0	
TOTAL COMMENTS	16	26	21	

PARKING

	PAVED PARKING LOTS	PARKING PERMITS	REDUCE PARKING	SIGNAGE AND DELINEATION	SHUTTLE SERVICE	UNPAVED PARKING LOT	IN TOP 3 CONCERNS
POSITIVE COMMENTS	8	10	3	31	16	12	12
NEGATIVE COMMENTS	11	4	0	1	6	0	
TOTAL COMMENTS	19	14	3	32	22	12	

TRAILS

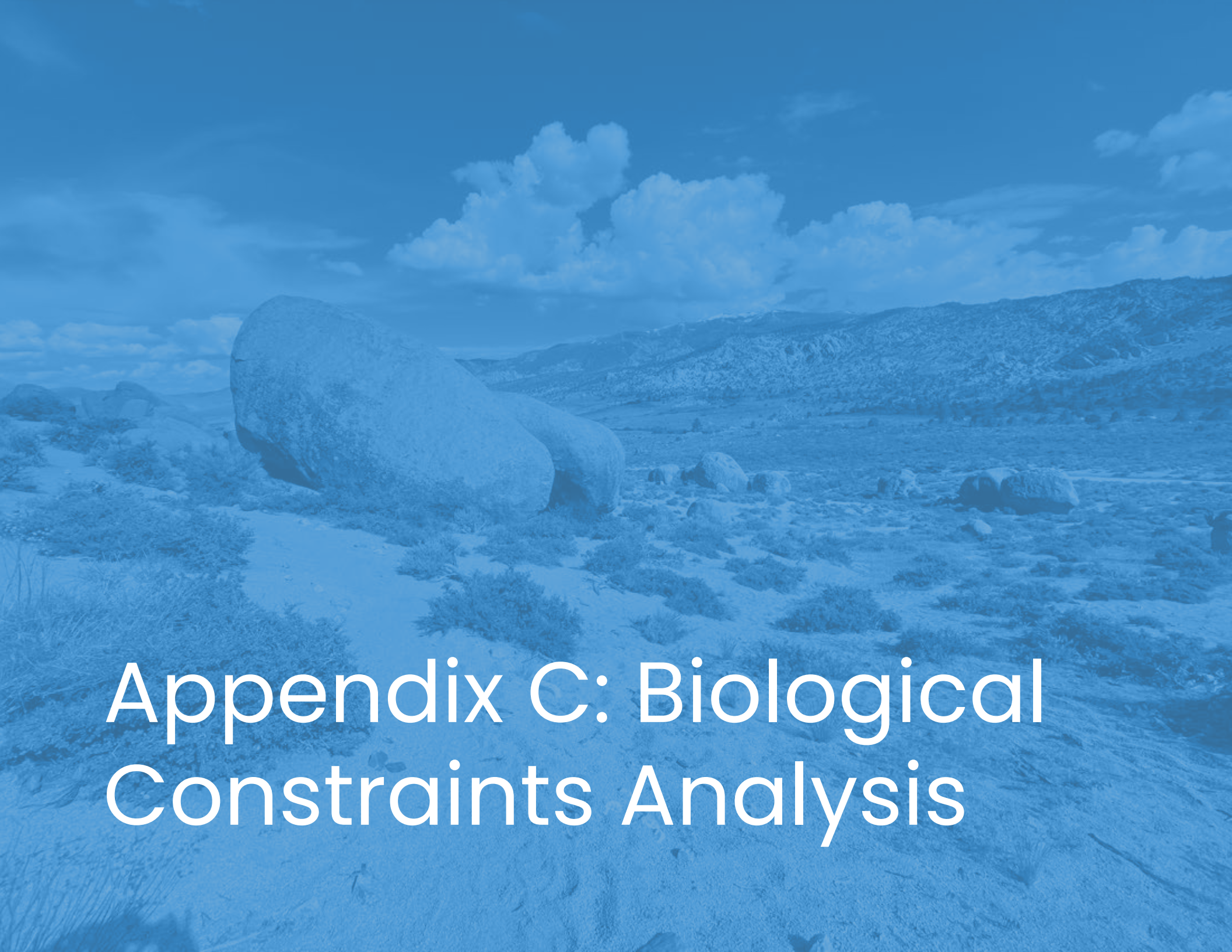
	CREATE NEW TRAILS	DELINEATE TRAILS	DECOMMISSION TRAILS	IN TOP 3 CONCERNS
POSITIVE COMMENTS	17	22	17	5
NEGATIVE COMMENTS	2	0	2	
TOTAL COMMENTS	19	22	19	

TRIBAL INVOLVEMENT

	TRIBAL AMBASSADOR	EDUCATION PROGRAMS	REPRESENTATION ON COMMITTEES	IN TOP 3 CONCERNS
POSITIVE COMMENTS	18	24	26	6
NEGATIVE COMMENTS	0	0	0	
TOTAL COMMENTS	18	24	26	

WILDFIRES

	FIRE BAN	FIRE PITS DEVELOPED CAMPSITES	FIRE PITS PRIMITIVE/ DISPERSED CAMPSITES	IN TOP 3 CONCERNS
POSITIVE COMMENTS	24	26	7	7
NEGATIVE COMMENTS	2	4	5	
TOTAL COMMENTS	26	30	12	

A blue-tinted landscape photograph of a desert. In the foreground, there are several large, smooth boulders scattered across a sandy and rocky terrain with sparse, low-lying vegetation. In the background, there are rolling hills and mountains under a sky with scattered white clouds. The entire image has a uniform blue color cast.

Appendix C: Biological Constraints Analysis

HELIX Environmental Planning, Inc.
1180 Iron Point Road, Suite 130
Folsom, CA 95630
916.435.1202
www.helixepi.com



October 24, 2023

Project 00030.00004.001

Tim Bevins
Alta Planning + Design, Inc.
617 W. 7th Street, Suite 1103
Los Angeles, CA 90017
timbevins@altago.com

Subject: Biological Constraints Analysis for the Buttermilk Recreational Plan Area, Inyo County, CA

Dear Mr. Bevins:

On behalf of Alta Planning + Design, Inc., HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Constraints Analysis for the Buttermilk Recreational Plan Area near the Bishop in Inyo County, California (Attachment A; Figure 1). The purpose of our analysis was to identify potential constraints related to biological resources, including potential wetlands or other aquatic resources in the proposed Buttermilk Recreational Plan Area. This memorandum includes a description of the location, setting, and existing biological condition of the site as well as an analysis of the potential for sensitive biological resources to occur on the site. The information presented in the biological constraints analysis letter report will also inform the Eastern Sierra Council of Governments as to the opportunities and constraints in advance of conducting follow-on environmental compliance documentation pursuant to the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and/or regulatory permitting.

Location and Setting

The approximately 33,183-acre site (Study Area) consists primarily of undeveloped land dominated by native plant assemblages common to the eastern slopes of the Sierra Nevada and the Great Basin Desert in the Owens Valley. Small portions of private land in the Study Area are currently used for irrigated agriculture, especially near Round Valley along US Highway 395. Rural residences are also present in the Study Area.

The Study Area is located west and north of the City of Bishop, Inyo County, California. A portion of the Study Area extends along the Owens River where popular rock-climbing areas, including Happy Boulders and Sad Boulders, are located. Another section of the Study Area extends along Pine Creek Road towards Pine Creek Pass Trailhead, which provides public access into the John Muir Wilderness. Other rock-climbing areas are noted north of US Highway 168, including Buttermilk Boulders and the Checkerboard Boulders, and numerous hiking trailheads. The surrounding area also encompasses land managed by the US Forest Service (USFS) (Attachment A; Figure 2) and the Bureau of Land Management (BLM), which provides an abundance of other recreational uses such as fishing, camping, wildlife viewing, hunting, and off-road vehicle use.

Letter to Mr. Tim Bevins
October 24, 2023

Page 2 of 7

METHODS

Analysis Objectives

- Identify and depict the biological communities in the Study Area;
- Identify and evaluate sensitive resources and special-status plant and animal species that could occur in the Study Area; and,
- Provide conclusions and future management recommendations.

Database Queries

HELIX conducted a review of special-status species records for the Study Area including *Tungsten Hills*, CA US Geological Survey 7.5-minute and eight surrounding quadrangles (quads) from the following databases:

- US Fish and Wildlife Service Information for Planning and Consultation (IPaC) (USFWS 2023a);
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2023);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2023);
- Bureau of Land Management Sensitive plants lists for the Bishop Field office (BLM 2022);
- Bureau of Land Management Sensitive wildlife lists for the Bishop Field office (BLM 2014);
- USFS Region 5 Forester's Sensitive Animal Species List for Inyo National Forest (USFS 2013); and,
- USFS Region 5 Forester's Sensitive Plant Species List for Inyo National Forest (USFS 2013).

The results of these database queries are provided in Attachment B. Species were analyzed for their potential to occur in the Study Area based on habitat affinities, elevation range, and geographic range (Attachment C). For the purposes of this report, special-status species and other protected biological resources are those that fall into one or more of the following categories:

- Species listed as rare, threatened, or endangered under the federal Endangered Species Act (FESA) or California Endangered Species Act (CESA), including candidates and species proposed for listing;
- Species designated as rare, protected, or fully protected pursuant to the California Fish and Game Code (CFGC);
- Species considered a Species of Special Concern (SSC) by the CDFW;
- Species meeting the definition of rare or endangered under Section 15380 of CEQA;

Letter to Mr. Tim Bevins
October 24, 2023

Page 3 of 7

- Species considered to be sensitive by the BLM Bishop Field Office;
- Species considered to be sensitive by the USFS in Inyo National Forest;
- Plants having a California Rare Plant Rank (CRPR) of 1, 2, or 3;
- Nesting bird species protected by the CFGC and/or the Migratory Bird Treaty Act; or,
- Aquatic resources considered waters of the US or State.

Field Reconnaissance

A biological reconnaissance survey was conducted by HELIX Senior Biologist Patrick Martin on August 10 and 11, 2023. The Study Area was assessed at representative locations along Pine Creek Road, Buttermilk Road, and Chalk Bluff Road for plant communities, habitat types, aquatic resources, and wildlife present at the time of the survey, and assessed for the potential to support special-status species.

EXISTING CONDITIONS

The Study Area is primarily located on federally managed lands operated by the USFS and BLM that supports recreational use of the area that could include, but is not limited to: rock-climbing, hiking, camping, fishing, hunting, and off-road vehicle use. Private lands with irrigated agriculture and rural residences are also present. Most of the Study Area currently consists of native plant assemblages found along the eastern Sierra Nevada slopes and shrub dominated habitats of the Great Basin Desert. The Study Area supports aquatic resources with the main drainage of the Study Area consisting of the Owens River. All other drainages, such as Pine Creek and Horton Creek, support riparian habitat and are tributary to the Owens River. The Owens River is tributary to Owens Lake, a traditional navigable water. An aerial map is provided in Attachment A; Figure 3.

Vegetation Communities

Vegetation community mapping provided in Attachment A; Figure 4 uses the Existing Vegetation data (USFS 2018) from the Classification and Assessment with LANDSAT of Visible Ecology Groupings (CALVEG) Zone 9, the Great Basin (USFS 2018). The CALVEG habitat classification system is easily cross-walked to other classification systems, such as *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988).

A total of 26 vegetation communities occur within the Study Area. These habitats include alkali desert scrub, alpine dwarf-shrub, annual grassland, aspen, barren, bitterbrush, desert riparian, desert scrub, desert wash, eastside pine, fresh emergent wetland, juniper, lacustrine, lodgepole pine, mixed chaparral, montane chaparral, montane hardwood-conifer, perennial grassland, pinyon-juniper, riverine, sagebrush, Sierran mixed conifer, subalpine conifer, urban, and wet meadow. Representative site photographs are included in Attachment D.

Letter to Mr. Tim Bevins
October 24, 2023

Page 4 of 7

SPECIAL-STATUS SPECIES EVALUATION

Evaluation of Regionally Occurring Special-Status Plant Species

A total of 118 special-status plant species are known to occur in the region of the Study Area. A total of 52 of these species were determined to have potential to occur in the Study Area. Of these 52 species, four species are listed under the FESA or CESA. These species include Fish Slough milkvetch (*Astragalus lentiginosus* var. *piscinensis*) a federally threatened species; white bark pine (*Pinus albicaulis*), a species proposed for listing under FESA; Owens Valley checkerbloom (*Sidalcea covillei*), a state listed endangered species; and western Joshua tree (*Yucca brevifolia*), a candidate for listing under CESA.

The remaining 48 species are ranked by CNPS 1B, 2B or 3 or listed as sensitive by the BLM or USFS. Based on the literature review, other published information, California Wildlife Habitat Relationship (CWHR) vegetation mapping managed by CDFW, and the observed habitats present in the Study Area, special-status plant species have the potential to occur in the Study Area based on the presence of native plant assemblages and the limited amount of development in the Study Area. Potential impacts to special-status plant species or their habitats could occur as a result of the implementation of the Buttermilk Recreational Plan Area.

Evaluation of Regionally Occurring Special-Status Animal Species

A total of 54 special-status wildlife species are known to occur in the region of the Study Area. A total of 32 of these species were determined to have potential to occur in the Study Area. Of these 32 species 12 species are listed under the FESA or CESA, with federally designated critical habitat present for two species. These species include Crotch's bumble bee (*Bombus crotchii*), a candidate to be listed as endangered under CESA; Monarch butterfly (*Danaus plexippus* pop. 1), a candidate to be listed under FESA; Owens Tui chub (*Siphateles bicolor* ssp. *snyderi*), an endangered species under FESA and CESA; Sierra Nevada yellow-legged frog (*Rana sierrae*), an endangered species under FESA and threatened under CESA; Swainson's hawk (*Buteo swainsoni*), a threatened species under CESA; greater sage-grouse (*Centrocercus urophasianus*), a candidate species under CESA; yellow-billed cuckoo (*Coccyzus americanus occidentalis*), a threatened species under FESA and an endangered species under CESA; willow flycatcher (*Empidonax traillii*), an endangered species under CESA; southwestern willow flycatcher (*Empidonax traillii extimus*), an endangered species under FESA and CESA; bald eagle (*Haliaeetus leucocephalus*), an endangered species under CESA and a CDFW fully protected species; bank swallow (*Riparia riparia*), a threatened species under CESA; and Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), an endangered species under FESA and CESA.

Federally designated critical habitat is present in the western limits of the Study Area for Sierra Nevada yellow-legged frog and Sierra Nevada bighorn sheep. The remaining 20 sensitive wildlife species are listed as CDFW watch list, CDFW species of special concern, CDFW fully protected species or sensitive species of the BLM or USFS. There are numerous reported occurrences of special-status animal species in the Study Area. Potential impacts to special-status wildlife species or their habitats could occur as a result of the implementation of the Buttermilk Recreational Plan Area.

Monarch butterfly, a candidate to be listed under the FESA was observed in the Study Area along Pine Creek Road. Monarch butterflies were observed associated with narrow-leaf milkweed (*Asclepias fascicularis*), a larval host plant for this species, which was also observed to be abundant along Pine

Letter to Mr. Tim Bevins
October 24, 2023

Page 5 of 7

Creek Road. It can be assumed that Monarch butterfly will occur in the Study Area during all life stages for this species.

Evaluation of Nesting Birds

The Study Area provides a diverse array of vegetation communities that could provide nesting habitat for native birds throughout the entire Study Area. No nesting birds were observed during the reconnaissance level survey in August 2023. Native birds are protected from disturbance during the nesting season by CFGC and the Migratory Bird Treaty Act. The Study Area supports potential nesting habitat for nesting migratory birds, including raptors, in the form of trees, shrubs, and bare ground. Activities within the Study Area resulting in ground disturbance and/or vegetation removal have potential to cause physical disturbance to active bird nests, if present.

Evaluation of Jurisdictional Waters of the U.S. and State

HELIX conducted a routine assessment of wetlands and “other waters” of the US on August 10 and 11, 2023, generally in accordance with the US Army Corps of Engineers’ (USACE) Corps of Engineers Wetlands Delineation Manual, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). A formal delineation of wetlands was not completed.

The USFWS National Wetlands Inventory (NWI) online database was queried to identify whether any wetlands or other waters of the US, as mapped by the USFWS, are present in the Study Area. The query indicates that several NWI mapped aquatic resources occur within the Study Area, which include freshwater emergent wetland, freshwater forested/shrub wetland, freshwater pond, lake and riverine (USFWS 2023b). NWI features are displayed in Attachment A; Figure 5.

The Study Area supports aquatic resources with the main drainage of the Study Area consisting of the Owens River. All large drainages, such as Pine Creek, McGee Creek, Birch Creek, and Horton Creek support riparian habitat and are tributary to the Owens River. The Owens River is tributary to Owens Lake, a traditional navigable water. All drainages and adjacent wetlands in the Study Area are potentially jurisdictional features that would qualify as potential waters of the US or potential waters of the State. All drainages and wetlands are potential waters of the State. Riparian habitat may also fall under CDFW jurisdiction.

Tree Preservation

Inyo County does not include a tree preservation ordinance or other special codes related to trees.

CONCLUSION

Aquatic resources are present in the Study Area that would qualify as potential waters of the US or waters of the State subject to USACE and Regional Water Quality Control Board (RWQCB) jurisdiction under Sections 404 and 401 of the Clean Water Act as well as CDFW jurisdiction under Section 1600 of the CFGC. All potential waters of the US or State are tributary to Owens Lake, a traditional navigable water. Riparian habitat along streams may also fall under CDFW jurisdiction under Section 1600 of the CFGC. If any impacts to aquatic resources are expected, a formal aquatic resources delineation should be conducted and submitted to the resource agencies to determine the extent of jurisdiction. In the

Letter to Mr. Tim Bevins
October 24, 2023

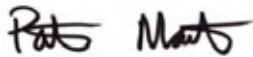
Page 6 of 7

event that any aquatic resources are determined to be jurisdictional, the project proponent will be required to apply for appropriate permit(s) to fill aquatic resources and any mitigation measures contained in the permits will require implementation prior to filling any onsite features deemed subject to regulation.

Special-status plant or animal species were not observed in the Study Area during a reconnaissance survey conducted in August 2023. However, there is potential habitat for 52 species of sensitive plants and 32 species of sensitive wildlife in addition to nesting migratory bird species. A total of four plant species and 12 wildlife species are listed under the FESA or CESA, with federally designated critical habitat present for two wildlife species. A full biological resources assessment would likely need to be prepared to detail biological resources more fully within the Study Area and to support CEQA, NEPA compliance, and other regulatory permitting for any proposed project within the Study Area. The potential presence of federally and state listed, and other special-status species will likely require habitat mitigation and implementation of applicable avoidance and minimization measures for implementation of the Buttermilk Recreational Plan Area.

If you have any questions regarding this Biological Constraints Analysis, please contact me by e-mail at PatrickM@helixepi.com.

Sincerely,



Patrick Martin
Senior Biologist/Wetland Scientist

Attachments:

- Attachment A: Figures
- Attachment B: Special-Status Species Database Queries
- Attachment C: Potential for Special-Status Species to Occur in the Study Area
- Attachment D: Representative Photographs

Letter to Mr. Tim Bevins
October 24, 2023

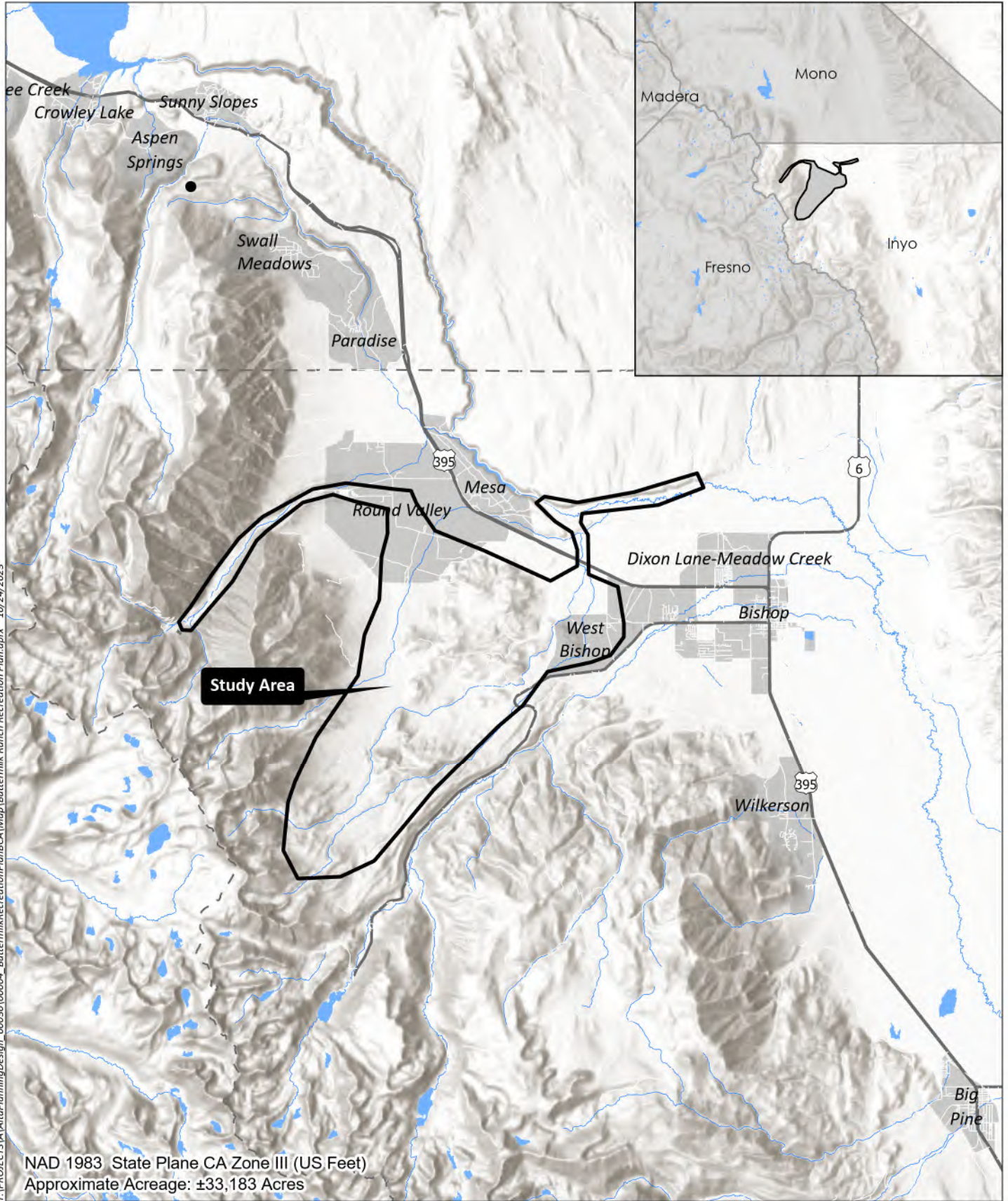
Page 7 of 7

REFERENCES

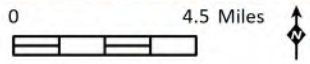
- California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDDB) RareFind 5. Dated August 1, 2023.
- California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org>. Dated August 1, 2023.
- Mayer, K.E. and W.F. Laudenslayer. 1988. A Guide to Wildlife Habitats of California. State of California, Resources Agency, Department of Fish and Game, Sacramento, CA 166pp.
- US Department of Agriculture Forest Service (USFS). 2013. USDA Forest Service, Pacific Southwest Region, Sensitive Species by Forest. Updated September 9.
2018. Existing Vegetation (Eveg) – Classification and Assessment with LANDSAT of Visible Ecological Groupings (CALVEG) Region 5, Zone 9, Great Basin.
- US Department of the Interior Bureau of Land Management (BLM). 2014. Special-status animals list for the Bishop field office. September 23.
2022. All BLM California Special-status plants. January 31.
- US Fish and Wildlife Service (USFWS). 2023a. Information for Planning and Consultation (IPaC) Trust Resource Report. Generated August 1, 2023 at <https://ecos.fws.gov/ipac/>.
- 2023b. National Wetlands Inventory. Wetlands Mapper. Accessed online August 1, 2023 at <https://www.fws.gov/wetlands/data/Mapper.html>.

Attachment A

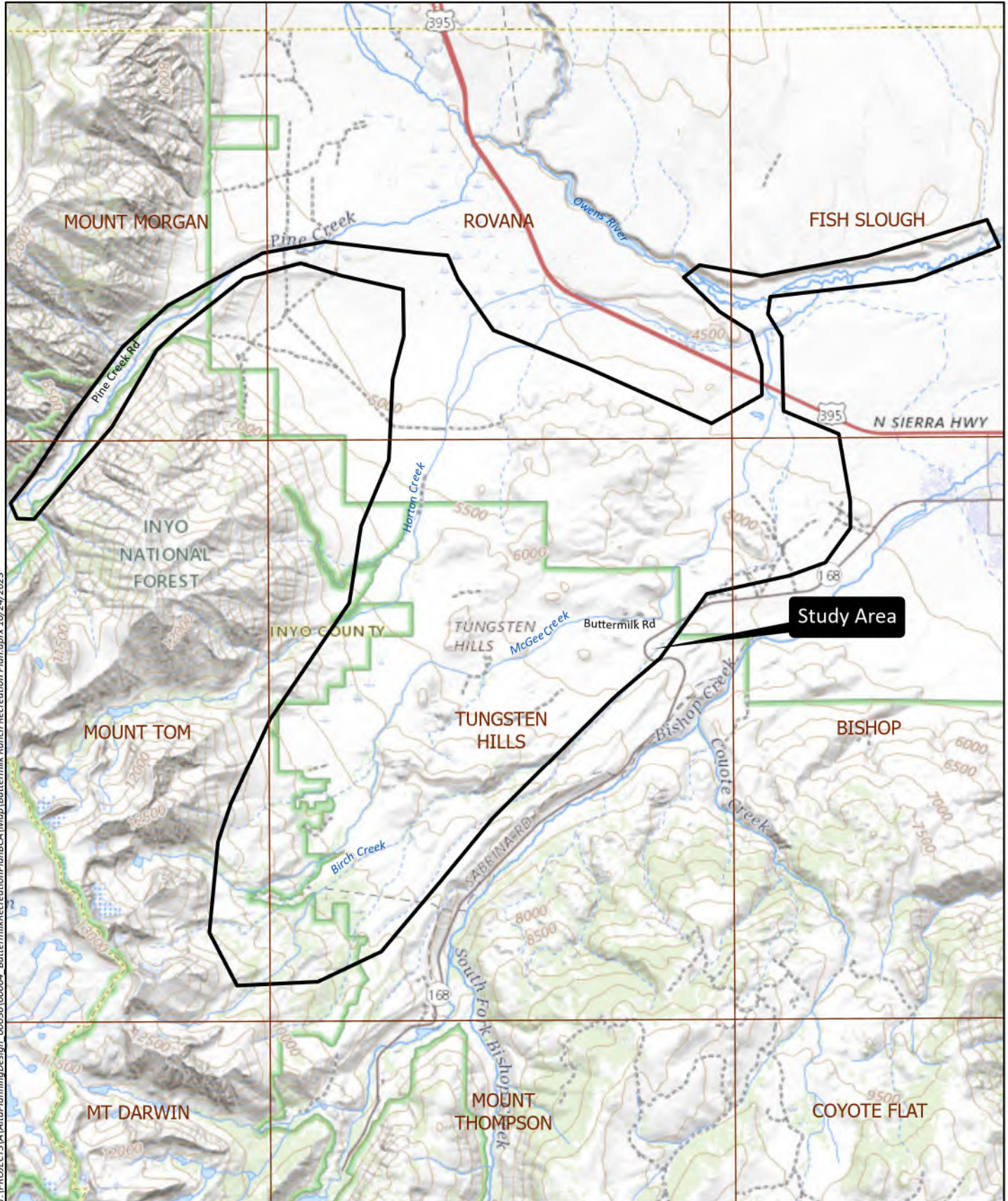
Figures



T:\PROJECTS\A\A\Map\ButtermilkRecreationPlan\Map\Buttermilk Ranch Recreation Plan.aprx 10/24/2023

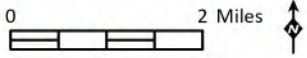


Source: Base Map Layers (Esri, USGS, NGA, NASA)



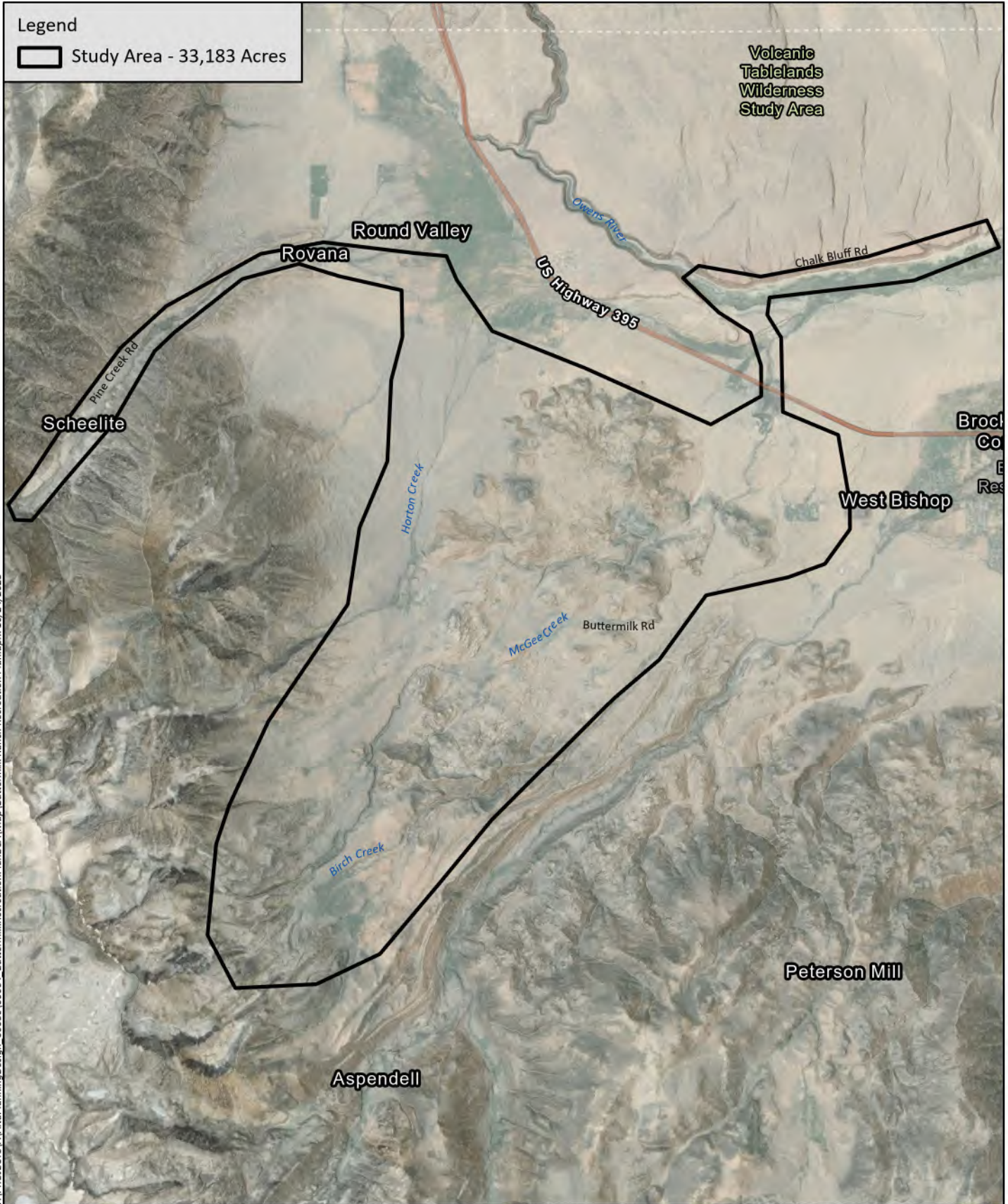
T:\PROJECTS\A\A\PlanningDesign_00030\000004_ButtermilkRecreationPlan\BCA\Map\Buttermilk Ranch Recreation Plan.aprx.10/24/2023

Source: USGS, The National Map, 2023

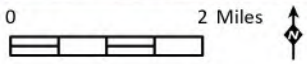


Legend

Study Area - 33,183 Acres



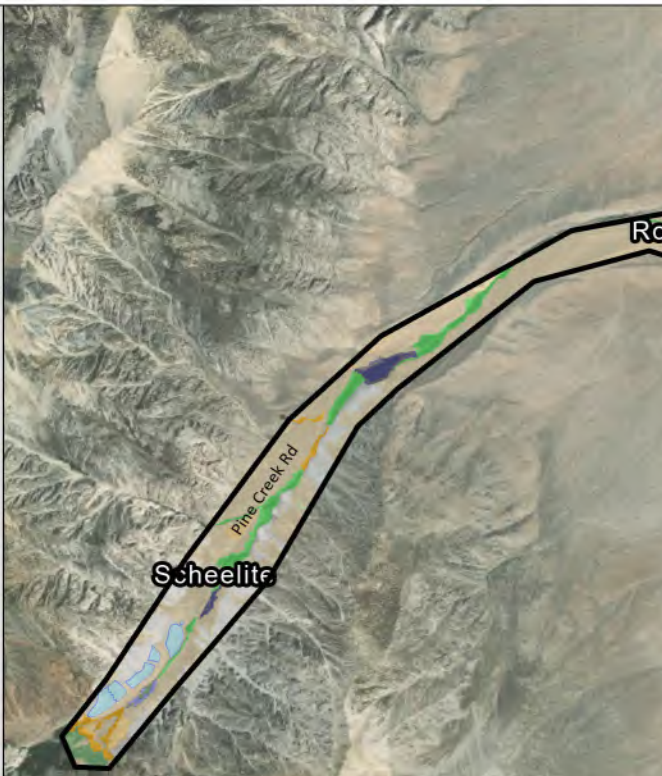
T:\PROJECTS\A\A\Ita\PlanningDesign_00030\000004_ButtermilkRecreationPlan\BCA\Map\Buttermilk Ranch Recreation Plan.aprx, 10/24/2023



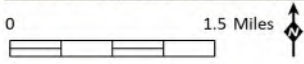
Source: Aerial (DigitalGlobe, 8/28/2021)

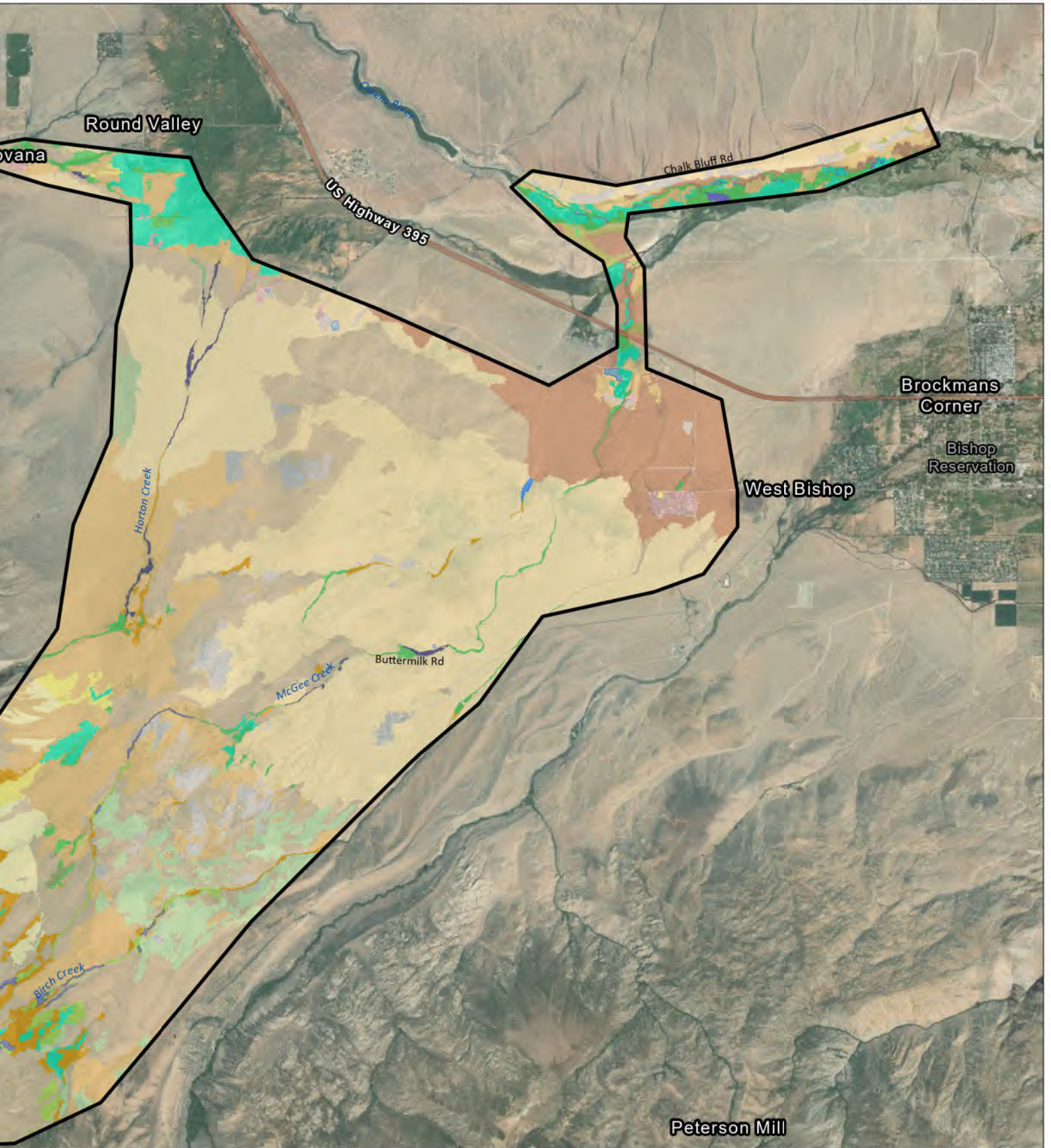
Legend

- | | |
|---|--|
|  Study Area - 33,183 Acres |  Lodgepole Pine |
|  Alkali Desert Scrub |  Mixed Chaparral |
|  Alpine Dwarf-Shrub |  Montane Chaparral |
|  Annual Grassland |  Montane Hardwood-Conifer |
|  Aspen |  Montane Riparian |
|  Barren |  Perennial Grassland |
|  Bitterbrush |  Pinyon-Juniper |
|  Desert Riparian |  Riverine |
|  Desert Scrub |  Sagebrush |
|  Desert Wash |  Sierran Mixed Conifer |
|  Eastside Pine |  Subalpine Conifer |
|  Fresh Emergent Wetland |  Urban |
|  Juniper |  Wet Meadow |
|  Lacustrine | |



T:\PROJECTS\A\Altia\PlanningDesign_00030\00004_ButtermilkRecreationPlan\Map\Buttermilk Ranch Recreation Plan.aprx 10/24/2023

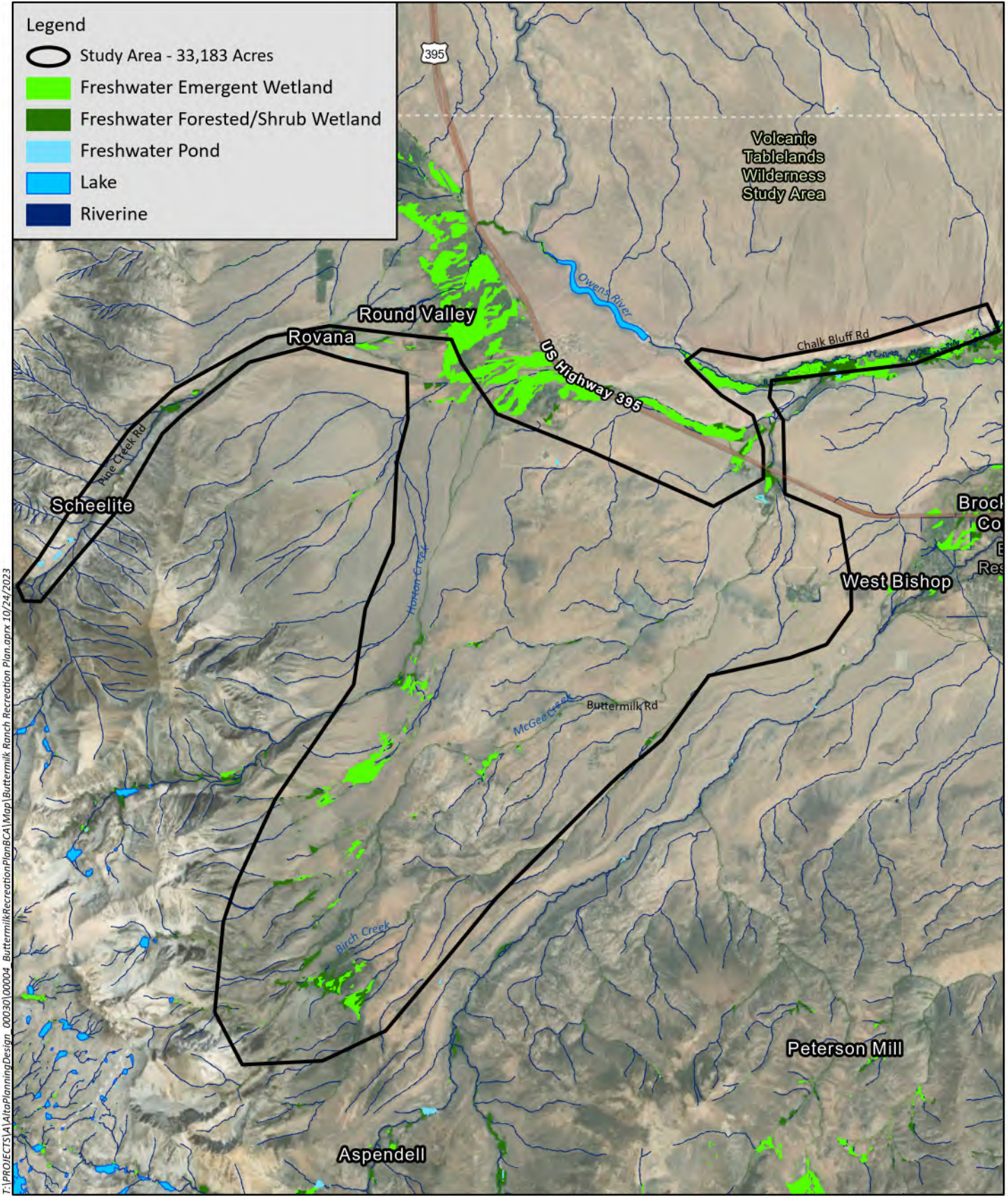




Source: USFS EVEG, 2018; Aerial (DigitalGlobe, 8/28/2021)

Vegetation Communities

Figure 4



T:\PROJECTS\A\A\PlanningDesign_00030\000004_ButtermilkRecreationPlan\Map\Buttermilk Ranch Recreation Plan.aprx, 10/24/2023

Attachment B

Special-Status Species
Database Queries



United States Department of the Interior

FISH AND WILDLIFE SERVICE
 Reno Fish And Wildlife Office
 1340 Financial Boulevard, Suite 234
 Reno, NV 89502-7147
 Phone: (775) 861-6300 Fax: (775) 861-6301



In Reply Refer To:
 Project Code: 2023-0111808
 Project Name: Buttermilk Recreation Plan

August 01, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

08/01/2023

2

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

08/01/2023

3

Attachment(s):

- Official Species List
 - Migratory Birds
-

08/01/2023

1

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office

1340 Financial Boulevard, Suite 234

Reno, NV 89502-7147

(775) 861-6300

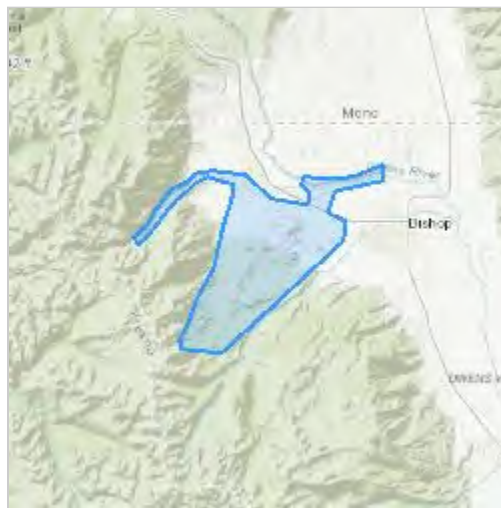
08/01/2023

2

PROJECT SUMMARY

Project Code: 2023-0111808
Project Name: Buttermilk Recreation Plan
Project Type: Recreation Operations
Project Description: Recreation plan.
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.342684950000006,-118.54869973699326,14z>



Counties: Inyo County, California

08/01/2023

3

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Fisher <i>Pekania pennanti</i> Population: SSN DPS There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3651	Endangered
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened
Sierra Nevada Bighorn Sheep <i>Ovis canadensis sierrae</i> Population: Sierra Nevada There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3646	Endangered
Sierra Nevada Red Fox <i>Vulpes vulpes necator</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4252	Endangered

08/01/2023

4

BIRDS

NAME	STATUS
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

AMPHIBIANS

NAME	STATUS
Mountain Yellow-legged Frog <i>Rana muscosa</i> Population: Northern California DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8037	Endangered
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

FISHES

NAME	STATUS
Owens Pupfish <i>Cyprinodon radiosus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4982	Endangered
Owens Tui Chub <i>Gila bicolor ssp. snyderi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7289	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Fish Slough Milk-vetch <i>Astragalus lentiginosus var. piscinensis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7947	Threatened

08/01/2023

5

CONIFERS AND CYCADS

NAME	STATUS
Whitebark Pine <i>Pinus albicaulis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Threatened

CRITICAL HABITATS

There are 2 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Sierra Nevada Bighorn Sheep <i>Ovis canadensis sierrae</i> https://ecos.fws.gov/ecp/species/3646#crithab	Final
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> https://ecos.fws.gov/ecp/species/9529#crithab	Final

08/01/2023

1

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American White Pelican <i>pelecanus erythrorhynchos</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31

08/01/2023

2

NAME	BREEDING SEASON
<p>Black Swift <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878</p>	Breeds Jun 15 to Sep 10
<p>Black Tern <i>Chlidonias niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093</p>	Breeds May 15 to Aug 20
<p>Black-throated Gray Warbler <i>Dendroica nigrescens</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds May 1 to Jul 20
<p>California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31
<p>Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462</p>	Breeds May 15 to Jul 15
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 31
<p>Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p>Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere

08/01/2023

3

NAME	BREEDING SEASON
<p>Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408</p>	Breeds Apr 20 to Sep 30
<p>Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631</p>	Breeds Mar 1 to Jul 15
<p>Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481</p>	Breeds elsewhere
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Pinyon Jay <i>Gymnorhinus cyanocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420</p>	Breeds Feb 15 to Jul 15
<p>Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002</p>	Breeds Apr 15 to Jul 15
<p>Sage Thrasher <i>Oreoscoptes montanus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433</p>	Breeds Apr 15 to Aug 10
<p>Virginia's Warbler <i>Vermivora virginiae</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9441</p>	Breeds May 1 to Jul 31
<p>Western Grebe <i>aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743</p>	Breeds Jun 1 to Aug 31
<p>Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

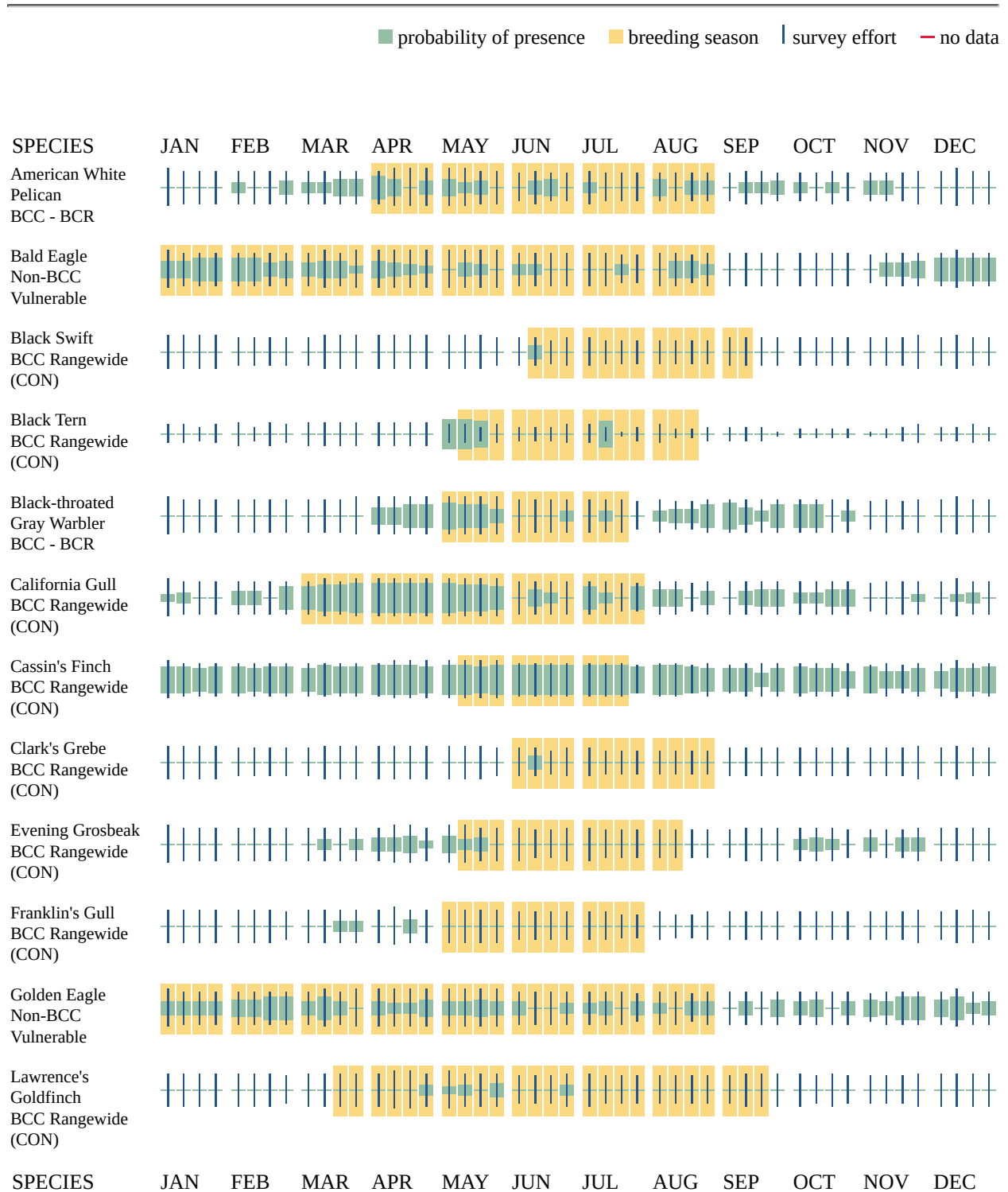
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

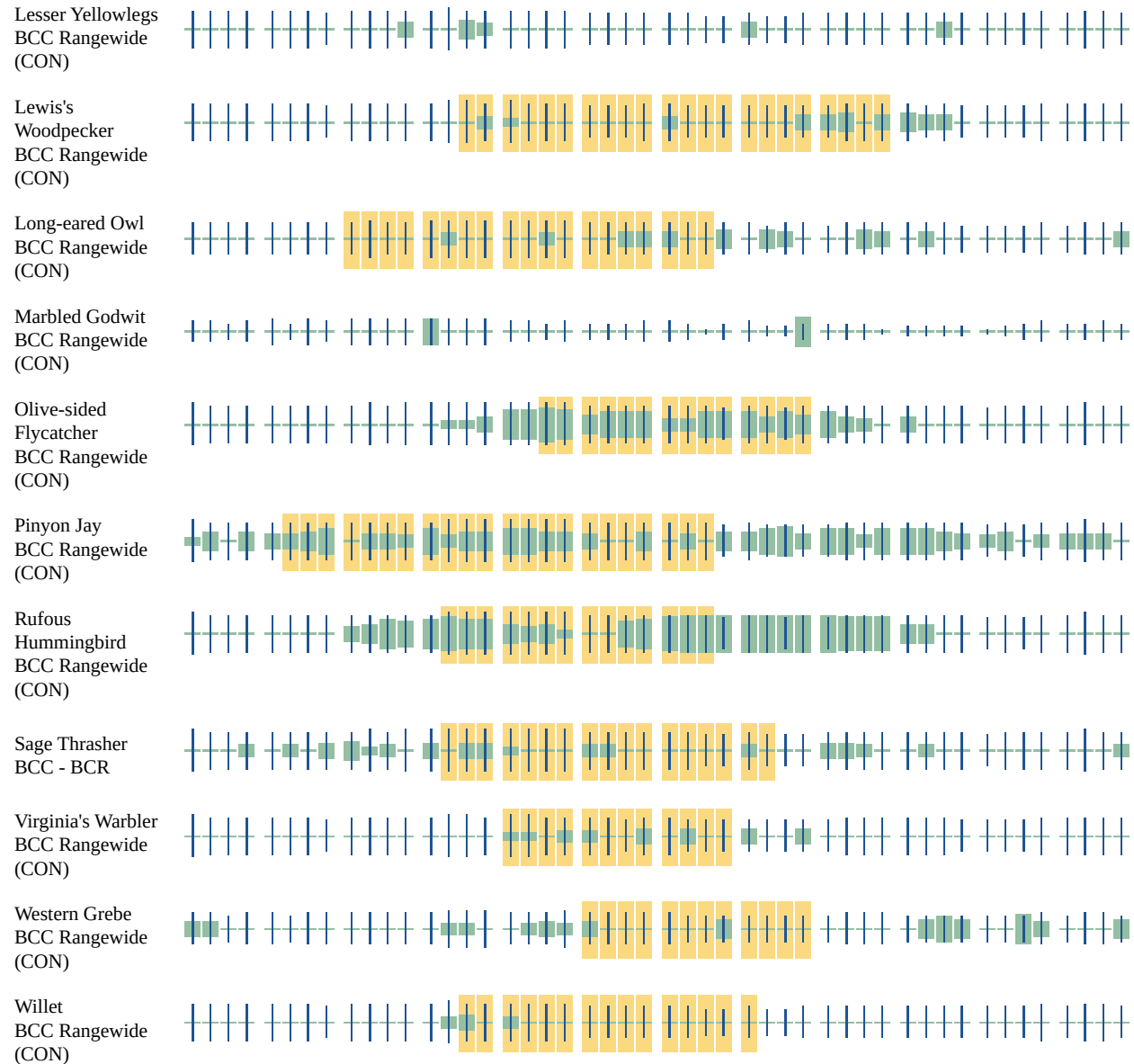
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



08/01/2023

6



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

08/01/2023

8

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

08/01/2023

10

IPAC USER CONTACT INFORMATION

Agency: HELIX Environmental Planning, Inc.
Name: Patrick Martin
Address: 1180 Iron Point Road
Address Line 2: Suite 130
City: Folsom
State: CA
Zip: 95630
Email: patrickm@helixepi.com
Phone: 9164351205



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Tungsten Hills (3711835) OR Fish Slough (3711844) OR Rovana (3711845) OR Mt. Morgan (3711846) OR Coyote Flat (3711824) OR Mt. Darwin (3711826) OR Bishop (3711834) OR Mt. Thompson (3711825) OR Mount Tom (3711836))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAD09020	<i>Hydromantes platycephalus</i> Mount Lyell salamander	None	None	G4	S4	WL
AAABB01040	<i>Anaxyrus canorus</i> Yosemite toad	Threatened	None	G2	S2	SSC
AAABH01170	<i>Lithobates pipiens</i> northern leopard frog	None	None	G5	S2	SSC
AAABH01340	<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	Endangered	Threatened	G1	S2	WL
ABNKC12060	<i>Accipiter gentilis</i> northern goshawk	None	None	G5	S3	SSC
ABNKC19070	<i>Buteo swainsoni</i> Swainson's hawk	None	Threatened	G5	S4	
ABNKC22010	<i>Aquila chrysaetos</i> golden eagle	None	None	G5	S3	FP
ABNKD06090	<i>Falco mexicanus</i> prairie falcon	None	None	G5	S4	WL
ABPAE33043	<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Endangered	Endangered	G5T2	S3	
ABPAU08010	<i>Riparia riparia</i> bank swallow	None	Threatened	G5	S3	
AFCHA02089	<i>Oncorhynchus clarkii seleniris</i> Paiute cutthroat trout	Threatened	None	G5T1	S1	
AFCJB1303J	<i>Siphateles bicolor snyderi</i> Owens tui chub	Endangered	Endangered	G4T1	S1	
AFCJB3705F	<i>Rhinichthys osculus ssp. 2</i> Owens speckled dace	None	None	G5T2Q	S2	SSC
AFCJC02090	<i>Catostomus fumeiventris</i> Owens sucker	None	None	G3	S3	SSC
AFCNB02090	<i>Cyprinodon radiosus</i> Owens pupfish	Endangered	Endangered	G1	S2	FP
AMACC02010	<i>Lasionycteris noctivagans</i> silver-haired bat	None	None	G3G4	S3S4	
AMACC05032	<i>Lasiurus cinereus</i> hoary bat	None	None	G3G4	S4	
AMACC07010	<i>Euderma maculatum</i> spotted bat	None	None	G4	S3	SSC
AMACC08010	<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None	None	G4	S2	SSC



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMACC10010	<i>Antrozous pallidus</i> pallid bat	None	None	G4	S3	SSC
AMAEA0102L	<i>Ochotona princeps schisticeps</i> gray-headed pika	None	None	G5T4	S2S4	
AMAEB03041	<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit	None	None	G5T5	S3?	SSC
AMAFF11033	<i>Microtus californicus vallicola</i> Owens Valley vole	None	None	G5T3	S3	SSC
AMAJA03017	<i>Vulpes vulpes necator pop. 2</i> Sierra Nevada red fox - Sierra Nevada DPS	Endangered	Threatened	G5TNR	S1	
AMAJF01014	<i>Martes caurina sierrae</i> Sierra marten	None	None	G4G5T3	S3	
AMAJF03010	<i>Gulo gulo</i> wolverine	Proposed Threatened	Threatened	G4	S1	FP
AMALE04015	<i>Ovis canadensis sierrae</i> Sierra Nevada bighorn sheep	Endangered	Endangered	G4T2	S2	FP
CTT45310CA	<i>Alkali Meadow</i> Alkali Meadow	None	None	G3	S2.1	
CTT52320CA	<i>Transmontane Alkali Marsh</i> Transmontane Alkali Marsh	None	None	G3	S2.1	
CTT63510CA	<i>Water Birch Riparian Scrub</i> Water Birch Riparian Scrub	None	None	GNR	SNR	
IIHYM24260	<i>Bombus pennsylvanicus</i> American bumble bee	None	None	G3G4	S2	
IIHYM24460	<i>Bombus morrisoni</i> Morrison bumble bee	None	None	G3	S1S2	
IIHYM24480	<i>Bombus crotchii</i> Crotch bumble bee	None	Candidate Endangered	G2	S2	
IMBIV04220	<i>Anodonta californiensis</i> California floater	None	None	G3Q	S2?	
IMGASJ0290	<i>Pyrgulopsis perturbata</i> Fish Slough springsnail	None	None	G1	S1	
IMGASJ0360	<i>Pyrgulopsis wongi</i> Wong's springsnail	None	None	G2	S2	
NBMUS3C011	<i>Elodium blandowii</i> Blandow's bog moss	None	None	G4	S2	2B.3
NBMUS4U010	<i>Myurella julacea</i> small mousetail moss	None	None	G5	S2	2B.3
NBMUS5S1B0	<i>Pohlia tundrae</i> tundra thread moss	None	None	G3	S3	2B.3
NLT0028030	<i>Solorina spongiosa</i> fringed chocolate chip lichen	None	None	G4G5	S1	2B.2



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
NLTEST91L0	<i>Dermatocarpon meiophyllizum</i> silverskin lichen	None	None	G3G5	S3	2B.3
PDAST2R0K0	<i>Crepis runcinata</i> fiddleleaf hawksbeard	None	None	G5	S3	2B.2
PDAST8H1R0	<i>Packera indecora</i> rayless mountain ragwort	None	None	G5	S2?	2B.2
PDBOR0V0U0	<i>Plagiobothrys parishii</i> Parish's popcornflower	None	None	G1	S1	1B.1
PDBRA060F0	<i>Boechera dispar</i> pinyon rockcress	None	None	G3	S3	2B.3
PDBRA111F0	<i>Draba lonchocarpa</i> spear-fruited draba	None	None	G5	S2S3	2B.3
PDBRA11210	<i>Draba praealta</i> tall draba	None	None	G5	S3	2B.3
PDBRA112A0	<i>Draba sierrae</i> Sierra draba	None	None	G3	S3	1B.3
PDBRA2N062	<i>Thelypodium integrifolium ssp. complanatum</i> foxtail thelypodium	None	None	G5T4T5	S2	2B.2
PDBRA40130	<i>Boechera tularensis</i> Tulare rockcress	None	None	G3	S3	1B.3
PDCAR0G0U0	<i>Sabulina stricta</i> bog sandwort	None	None	G5	S3	2B.3
PDFAB0F0S1	<i>Astragalus argophyllus var. argophyllus</i> silver-leaved milk-vetch	None	None	G5T4	S2	2B.2
PDFAB0F5N0	<i>Astragalus monoensis</i> Mono milk-vetch	None	Rare	G2	S2	1B.2
PDFAB0F7F0	<i>Astragalus ravenii</i> Raven's milk-vetch	None	None	G2	S2	1B.3
PDFAB0FB9E	<i>Astragalus lentiginosus var. piscinensis</i> Fish Slough milk-vetch	Threatened	None	G5T1	S1	1B.1
PDFAB2B2K2	<i>Lupinus magnificus var. hesperius</i> Mcgee Meadows lupine	None	None	G3T1Q	S1	1B.3
PDFAB2B2Z0	<i>Lupinus padre-crowleyi</i> Father Crowley's lupine	None	Rare	G2	S2	1B.2
PDHYD0C2F0	<i>Phacelia inyoensis</i> Inyo phacelia	None	None	G2	S2	1B.2
PDLOA031S0	<i>Mentzelia torreyi</i> Torrey's blazing star	None	None	G4	S2	2B.2
PDMAL11040	<i>Sidalcea covillei</i> Owens Valley checkerbloom	None	Endangered	G2	S2	1B.1
PDONA060R0	<i>Epilobium palustre</i> marsh willowherb	None	None	G5	S2	2B.3



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDRAN0L190	<i>Ranunculus hydrocharoides</i> frog's-bit buttercup	None	None	G4	S1	2B.1
PDROS0X092	<i>Ivesia kingii</i> var. <i>kingii</i> alkali ivesia	None	None	G4T3Q	S2	2B.2
PDROS18010	<i>Petrophytum caespitosum</i> ssp. <i>acuminatum</i> marble rockmat	None	None	G5T2	S2	1B.3
PDROS1B2R0	<i>Potentilla morefieldii</i> Morefield's cinquefoil	None	None	G2	S2	1B.3
PDSAX0P0A0	<i>Parnassia parviflora</i> small-flowered grass-of-Parnassus	None	None	G5?	S2	2B.2
PDSOL0Q010	<i>Oryctes nevadensis</i> Nevada oryctes	None	None	G3	S2	2B.1
PDVIO04431	<i>Viola pinetorum</i> ssp. <i>grisea</i> grey-leaved violet	None	None	G4G5T3	S3	1B.2
PMCYP03C85	<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i> western single-spiked sedge	None	None	G5T5	S2	2B.2
PMCYP0B0N0	<i>Fimbristylis thermalis</i> hot springs fimbristylis	None	None	G4	S1S2	2B.2
PMCYP0Q250	<i>Trichophorum pumilum</i> little bulrush	None	None	G5	S3	2B.2
PMJCG02040	<i>Triglochin palustris</i> marsh arrow-grass	None	None	G5	S2	2B.3
PMLIL02061	<i>Allium atrorubens</i> var. <i>atrorubens</i> Great Basin onion	None	None	G4T4	S2	2B.3
PMLIL0D0F0	<i>Calochortus excavatus</i> Inyo County star-tulip	None	None	G2	S2	1B.1
PMPOA4Z1H0	<i>Poa lettermanii</i> Letterman's blue grass	None	None	G4	S3	2B.3
PMPOA6P010	<i>Elymus salina</i> Salina Pass wild-rye	None	None	G5	S2S3	2B.3
PMPOA030Z0	<i>Potamogeton robbinsii</i> Robbins' pondweed	None	None	G5	S3	2B.3
PPOPH010L0	<i>Botrychium crenulatum</i> scalloped moonwort	None	None	G4	S3	2B.2

Record Count: 78

CNPS Rare Plant Inventory




Search Results

82 matches found. Click on scientific name for details




Search Criteria: CRPR is one of [1A:1B:2A:2B:3:4] , 9-Quad include [3711844:3711845:3711846:3711824:3711826:3711835:3711834:3711825:3711836]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<u><i>Agrostis humilis</i></u>	mountain bent grass	Poaceae	perennial herb	Jul-Sep	None	None	G4Q	S2	2B.3		1980-01-01	 © 2004 Steve Matson
<u><i>Aliciella triodon</i></u>	coyote gilia	Polemoniaceae	annual herb	Apr-Jun	None	None	G5	S2	2B.2		2006-10-04	 © 2020 Steve Matson
<u><i>Allium atrorubens</i></u> var. <u><i>atrorubens</i></u>	Great Basin onion	Alliaceae	perennial bulbiferous herb	May-Jun	None	None	G4T4	S2	2B.3		1994-01-01	 © 2021 Steve Matson
<u><i>Angelica kingii</i></u>	King's angelica	Apiaceae	perennial herb	Jun-Aug	None	None	G4	S3	4.2		2001-01-01	 © 2015 Steve Matson
<u><i>Antennaria pulchella</i></u>	beautiful pussy-toes	Asteraceae	perennial stoloniferous herb	Jun-Sep	None	None	G4	S4	4.3		1994-01-01	 © 2014 Steve Matson
<u><i>Arabis repanda</i></u> var. <u><i>greenei</i></u>	Greene's rockcress	Brassicaceae	perennial herb	Jun-Aug	None	None	G5T3Q	S3	3.3	Yes	2001-01-01	No Photo Available
<u><i>Astragalus argophyllus</i></u> var. <u><i>argophyllus</i></u>	silver-leaved milk-vetch	Fabaceae	perennial herb	May-Jul	None	None	G5T4	S2	2B.2		1980-01-01	No Photo Available
<u><i>Astragalus inyoensis</i></u>	Inyo milk-vetch	Fabaceae	perennial herb	May-Jul	None	None	G3	S3	4.2		1974-01-01	No Photo Available

<u><i>Astragalus kentrophyta</i></u> var. <u><i>danaus</i></u>	Sweetwater Mountains milk-vetch	Fabaceae	perennial herb	Jul-Sep	None	None	G5T4	S4	4.3			1974-01-01	No Photo Available
<u><i>Astragalus lentiginos</i></u> var. <u><i>piscinensis</i></u>	Fish Slough milk-vetch	Fabaceae	perennial herb	Jun-Jul	FT	None	G5T1	S1	1B.1	Yes		1980-01-01	No Photo Available
<u><i>Astragalus monoensis</i></u>	Mono milk-vetch	Fabaceae	perennial herb	Jun-Aug	None	CR	G2	S2	1B.2	Yes		1974-01-01	No Photo Available
<u><i>Astragalus ravenii</i></u>	Raven's milk-vetch	Fabaceae	perennial herb	Jul-Sep	None	None	G2	S2	1B.3	Yes		1974-01-01	No Photo Available
<u><i>Boechea dispar</i></u>	pinyon rockcress	Brassicaceae	perennial herb	Mar-Jun	None	None	G3	S3	2B.3			1994-01-01	No Photo Available
<u><i>Boechea pygmaea</i></u>	Tulare County rockcress	Brassicaceae	perennial herb	Jun-Jul	None	None	G3	S3	4.3	Yes		1974-01-01	No Photo Available
<u><i>Boechea tularensis</i></u>	Tulare rockcress	Brassicaceae	perennial herb	(May)Jun-Jul(Aug)	None	None	G3	S3	1B.3	Yes		2011-07-05	No Photo Available
<u><i>Botrychium ascendens</i></u>	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	(Jun)Jul-Aug	None	None	G4	S2	2B.3			1994-01-01	 © 2005 Steve Matson
<u><i>Botrychium crenulatum</i></u>	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	Jun-Sep	None	None	G4	S3	2B.2			1984-01-01	 © 2016 Steve Matson
<u><i>Calochortus excavatus</i></u>	Inyo County star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jul	None	None	G2	S2	1B.1	Yes		1974-01-01	No Photo Available
<u><i>Calyptridium pygmaeum</i></u>	pygmy pussypaws	Montiaceae	annual herb	Jun-Aug	None	None	G1G2	S1S2	1B.2	Yes		2008-10-10	No Photo Available

<u><i>Carex buxbaumii</i></u>	Buxbaum's sedge	Cyperaceae	perennial rhizomatous herb	Mar-Aug	None	None	G5	S3	4.2		2001-01-01	
												© 2008 Dean Wm. Taylor, Ph.D.
<u><i>Carex congdonii</i></u>	Congdon's sedge	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
<u><i>Carex incurviformis</i></u>	Mt. Dana sedge	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G4G5	S4	4.3		1994-01-01	No Photo Available
<u><i>Carex scirpoidea</i></u> ssp. <u><i>pseudoscirpoidea</i></u>	western single-spiked sedge	Cyperaceae	perennial rhizomatous herb	Jul-Sep	None	None	G5T5	S2	2B.2		2001-01-01	No Photo Available
<u><i>Carex tahoensis</i></u>	Tahoe sedge	Cyperaceae	perennial rhizomatous herb	Jul-Aug	None	None	G5	S4	4.3		2001-01-01	No Photo Available
<u><i>Chaetadelpa wheeleri</i></u>	Wheeler's dune-broom	Asteraceae	perennial rhizomatous herb	Apr-Sep	None	None	G4	S2	2B.2		2001-01-01	No Photo Available
<u><i>Cleomella brevipes</i></u>	short-pedicelled cleomella	Cleomaceae	annual herb	May-Oct	None	None	G4	S3	4.2		2001-01-01	No Photo Available
<u><i>Crepis runcinata</i></u>	fiddleleaf hawksbeard	Asteraceae	perennial herb	May-Aug	None	None	G5	S3	2B.2		2015-10-26	No Photo Available
<u><i>Cryptantha glomeriflora</i></u>	clustered-flower cryptantha	Boraginaceae	annual herb	Jun-Sep	None	None	G4Q	S4	4.3	Yes	2001-01-01	No Photo Available
<u><i>Delphinium inopinum</i></u>	unexpected larkspur	Ranunculaceae	perennial herb	May-Jul	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Dermatocarpon meiophyllizum</i></u>	silverskin lichen	Verrucariaceae	foliose lichen (aquatic)		None	None	G3G5	S3	2B.3		2022-07-14	No Photo Available

<u><i>Draba californica</i></u>	California draba	Brassicaceae	perennial herb	Jul-Aug	None	None	G3	S3	4.2		1994-01-01	No Photo Available
<u><i>Draba lonchocarpa</i></u>	spear-fruited draba	Brassicaceae	perennial herb	Jun-Jul	None	None	G5	S2S3	2B.3		2001-01-01	No Photo Available
<u><i>Draba praealta</i></u>	tall draba	Brassicaceae	perennial herb	Jul-Aug	None	None	G5	S3	2B.3		2001-01-01	No Photo Available
<u><i>Draba sierrae</i></u>	Sierra draba	Brassicaceae	perennial herb	Jun-Aug	None	None	G3	S3	1B.3	Yes	1974-01-01	No Photo Available
<u><i>Draba subumbellata</i></u>	mound draba	Brassicaceae	perennial herb	Jul	None	None	G3	S3	4.3		1994-01-01	No Photo Available
<u><i>Elodium blandowii</i></u>	Blandow's bog moss	Helodiaceae	moss		None	None	G4	S2	2B.2		2001-01-01	 © 2013 Scot Loring
<u><i>Elymus salina</i></u>	Salina Pass wild-rye	Poaceae	perennial rhizomatous herb	May-Jun	None	None	G5	S2S3	2B.3		2001-01-01	No Photo Available
<u><i>Epilobium palustre</i></u>	marsh willowherb	Onagraceae	perennial rhizomatous herb	Jul-Sep	None	None	G5	S2	2B.3		2001-01-01	No Photo Available
<u><i>Eriastrum sparsiflorum</i></u>	few-flowered eriastrum	Polemoniaceae	annual herb	May-Sep	None	None	G5	S4	4.3		2012-09-04	No Photo Available
<u><i>Ericameria albida</i></u>	white-flowered rabbitbrush	Asteraceae	perennial evergreen shrub	Jun-Nov	None	None	G4	S3	4.2		2001-01-01	No Photo Available
<u><i>Eriogonum baileyi</i> var. <i>praebens</i></u>	Bailey's woolly buckwheat	Polygonaceae	annual herb	May-Sep	None	None	G5T4	S4	4.3		2001-01-01	No Photo Available
<u><i>Erythranthe laciniata</i></u>	cut-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jul	None	None	G4	S4	4.3	Yes	1974-01-01	 © 2017 Steven Perry

<u><i>Euphrosyne nevadensis</i></u>	Nevada wormwood	Asteraceae	annual herb	May-Oct	None	None	G4	S3	4.3		1974-01-01	No Photo Available
<u><i>Fimbristylis thermalis</i></u>	hot springs fimbriatylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	None	None	G4	S1S2	2B.2		1980-01-01	No Photo Available
<u><i>Fritillaria pinetorum</i></u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May-Jul(Sep)	None	None	G4	S4	4.3	Yes	2001-01-01	 © 2008 Steve Matson
<u><i>Goodmania luteola</i></u>	golden goodmania	Polygonaceae	annual herb	Apr-Aug	None	None	G3	S3	4.2		1994-01-01	 © 2007 Steve Matson
<u><i>Hulsea vestita</i> ssp. <i>inyoensis</i></u>	Inyo hulsea	Asteraceae	perennial herb	Apr-Jun	None	None	G5T2T3	S1S2	2B.2		1980-01-01	 © 2011 Steve Matson
<u><i>Ivesia kingii</i> var. <i>kingii</i></u>	alkali ivesia	Rosaceae	perennial herb	May-Aug	None	None	G4T3Q	S2	2B.2		1988-01-01	 © 2008 Steve Matson
<u><i>Jamesia americana</i> var. <i>rosea</i></u>	rosy-petalled cliffbush	Hydrangeaceae	perennial deciduous shrub	May-Sep	None	None	G5T4	S4	4.3		1994-01-01	 © 2005 Steve Matson
<u><i>Loeflingia squarrosa</i> var. <i>artemisiarum</i></u>	sagebrush loeflingia	Caryophyllaceae	annual herb	Apr-May	None	None	G5T3	S2	2B.2		1974-01-01	No Photo Available
<u><i>Loeseliastrum depressum</i></u>	depressed standing-cypress	Polemoniaceae	annual herb		None	None	G4	S3	4.3		2008-11-20	No Photo Available
<u><i>Lomatium rigidum</i></u>	stiff lomatium	Apiaceae	perennial herb	Apr-May	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Lupinus magnificus</i> var. <i>hesperius</i></u>	Mcgee Meadows lupine	Fabaceae	perennial herb	Apr-Jun	None	None	G3T1Q	S1	1B.3	Yes	1980-01-01	No Photo Available
<u><i>Lupinus padre-crowleyi</i></u>	Father Crowley's lupine	Fabaceae	perennial herb	Jul-Aug	None	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

<u><i>Mentzelia torreyi</i></u>	Torrey's blazing star	Loasaceae	perennial herb	Jun-Aug	None	None	G4	S2	2B.2		2001-01-01	No Photo Available
<u><i>Muilla coronata</i></u>	crowned muilla	Themidaceae	perennial bulbiferous herb	Mar-Apr(May)	None	None	G3	S3	4.2		1988-01-01	No Photo Available
<u><i>Myurella julacea</i></u>	small mousetail moss	Pterigynandraceae	moss		None	None	G5	S2	2B.3		2001-01-01	 © 2021 Scot Loring
<u><i>Oryctes nevadensis</i></u>	Nevada oryctes	Solanaceae	annual herb	Apr-Jun	None	None	G3	S2	2B.1		1974-01-01	No Photo Available
<u><i>Packera indecora</i></u>	rayless mountain ragwort	Asteraceae	perennial herb	Jul-Aug	None	None	G5	S2?	2B.2		2001-01-01	 © 2013 Kirsten Bovee
<u><i>Parnassia parviflora</i></u>	small-flowered grass-of-Parnassus	Parnassiaceae	perennial herb	Aug-Sep	None	None	G5?	S2	2B.2		2008-12-10	No Photo Available
<u><i>Penstemon papillatus</i></u>	Inyo beardtongue	Plantaginaceae	perennial herb	Jun-Jul	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Petrophytum caespitosum</i> ssp. <i>acuminatum</i></u>	marble rockmat	Rosaceae	perennial evergreen shrub	Aug-Sep	None	None	G5T2	S2	1B.3	Yes	2001-01-01	No Photo Available
<u><i>Phacelia inyoensis</i></u>	Inyo phacelia	Hydrophyllaceae	annual herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Plagiobothrys parishii</i></u>	Parish's popcornflower	Boraginaceae	annual herb	Mar-Jun(Nov)	None	None	G1	S1	1B.1	Yes	2001-01-01	No Photo Available
<u><i>Plagiobryoides vinosula</i></u>	wine-colored tufa moss	Bryaceae	moss		None	None	G3G4	S3S4	4.2		2014-06-10	No Photo Available
<u><i>Poa lettermanii</i></u>	Letterman's blue grass	Poaceae	perennial herb	Jul-Aug	None	None	G4	S3	2B.3		2001-01-01	No Photo Available

<u><i>Pohlia tundrae</i></u>	tundra thread moss	Mielichhoferiaceae	moss		None	None	G3	S3	2B.3		2001-01-01	 ©2014 Dean Wm. Taylor
<u><i>Potamogeton robbinsii</i></u>	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	None	None	G5	S3	2B.3		1994-01-01	 ©2014 Dana York
<u><i>Potentilla morefieldii</i></u>	Morefield's cinquefoil	Rosaceae	perennial herb	Jul-Sep	None	None	G2	S2	1B.3	Yes	1994-01-01	No Photo Available
<u><i>Primula pauciflora</i></u>	beautiful shootingstar	Primulaceae	perennial herb	Apr-Jun	None	None	G5	S3	4.2		2001-01-01	 © 2008 Steve Matson
<u><i>Ranunculus hydrocharoides</i></u>	frog's-bit buttercup	Ranunculaceae	perennial herb (aquatic)	(May)Jun-Sep	None	None	G4	S1	2B.1		1974-01-01	No Photo Available
<u><i>Sabulina stricta</i></u>	bog sandwort	Caryophyllaceae	perennial herb	Jul-Sep	None	None	G5	S3	2B.3		2010-04-06	No Photo Available
<u><i>Sarcobatus baileyi</i></u>	Bailey's greasewood	Sarcobataceae	perennial deciduous shrub	Apr-Jul	None	None	G4	S1	2B.3		2011-08-09	No Photo Available
<u><i>Sidalcea covillei</i></u>	Owens Valley checkerbloom	Malvaceae	perennial herb	Apr-Jun	None	CE	G2	S2	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Solorina spongiosa</i></u>	fringed chocolate chip lichen	Peltigeraceae	crustose lichen (terricolous)		None	None	G4G5	S1	2B.2		2014-03-01	 © 2014 Martin Hutten
<u><i>Spartina gracilis</i></u>	alkali cord grass	Poaceae	perennial rhizomatous herb	Jun-Aug	None	None	G5	S3	4.2		1974-01-01	No Photo Available
<u><i>Thalictrum alpinum</i></u>	arctic meadow-rue	Ranunculaceae	perennial stoloniferous herb	Jul-Aug	None	None	G5	S3	4.3		2001-01-01	No Photo Available
<u><i>Thelypodium integrifolium</i></u> <u>ssp.</u> <u>complanatum</u>	foxtail thelypodium	Brassicaceae	annual/perennial herb	Jun-Oct	None	None	G5T4T5	S2	2B.2		2001-01-01	No Photo Available

<u><i>Tonestus peirsonii</i></u>	Peirson's tonestus	Asteraceae	perennial herb	Jul-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Trichophorum pumilum</i></u>	little bulrush	Cyperaceae	perennial rhizomatous herb	Aug	None	None	G5	S3	2B.2		1994-01-01	No Photo Available
<u><i>Triglochin palustris</i></u>	marsh arrow-grass	Juncaginaceae	perennial rhizomatous herb	Jul-Aug	None	None	G5	S2	2B.3		1980-01-01	No Photo Available
<u><i>Viola pinetorum ssp. grisea</i></u>	grey-leaved violet	Violaceae	perennial herb	Apr-Jul	None	None	G4G5T3	S3	1B.2	Yes	1994-01-01	No Photo Available

Showing 1 to 82 of 82 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 1 August 2023].

USDA Forest Service, Pacific Southwest Region Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List		Inyo NF
Scientific Name (Common Name)		
Abronia alpina (Ramshaw Meadows abronia)		X
Abronia nana var. covillei (Coville's dwarf abronia)		X
Astragalus cimae var. sufflatus (inflated Cima milk-vetch)		X
Astragalus johannis-howellii (Long Valley milk-vetch)		X
Astragalus lemmonii (Lemmon's milk-vetch)		X
Astragalus lentiginosus var. kernensis (Kern Plateau milk-vetch)		X
Astragalus monoensis (Mono milk-vetch)		X
Astragalus ravenii (Raven's milk-vetch)		X
Boechera bodiensis (Bodie Hills rockcress)		X
Boechera evadens (hidden rockcress)		X
Boechera pinzliae (Pinzl's rockcress)		X
Boechera shockleyi (Shockley's rockcress)		X
Boechera tiehmii (Tiehm's rockcress)		X
Boechera tularensis (Tulare rockcress)		X
Botrychium ascendens (upswept moonwort)		X
Botrychium crenulatum (scalloped moonwort)		X
Botrychium lineare (slender moonwort)		X
Botrychium lunaria (common moonwort)		X
Botrychium minganense (mingan moonwort)		X
Botrychium paradoxum (paradox moonwort)		X
Botrychium tunux (moosewort)		X
Botrychium yaaxudakeit (giant moonwort)		X
Bruchia bolanderi (Bolander's bruchia)		X
Calochortus excavatus (Inyo County star-tulip)		X
Calyptidium pygmaeum (pygmy pussypaws)		X
Carex tiogana (Tioga Pass sedge)		X
Cladium californica (California saw-grass)		X
Cordylanthus eremicus ssp. kernensis (Kern Plateau bird's beak)		X
Cryptantha circumscissa var. rosulata (rosette cushion cryptantha)		X
Cryptantha incana (Tulare cryptantha)		X
Dedeckera eurekaensis (July gold)		X
Draba asterophora var. asterophora (Tahoe draba)		X
Draba cruciata (Mineral King draba)		X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management in Forest Service Manual (FSM) 2670.

1

nt of sensitive species can be found

USDA Forest Service, Pacific Southwest Region Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Inyo NF
Draba incrassata (Sweetwater Mountains draba)	X
Draba monoensis (White Mountains draba)	X
Draba sharsmithii (Mt. Whitney draba)	X
Ericameria gilmanii (Gilman's goldenbush)	X
Erigeron aequifolius (Hall's daisy)	X
Erigeron multiceps (Kern River daisy)	X
Erigeron uncialis var. uncialis (limestone daisy)	X
Eriogonum wrightii var. olanchense (Olancho Peak buckwheat)	X
Helodium blandowii (Blandow's bog moss)	X
Hesperidanthus jaegeri (Jaeger's hesperidanthus)	X
Horkelia hispidula (White Mountains horkelia)	X
Hulsea brevifolia (short-leaved hulsea)	X
Lupinus duranii (Mono Lake lupine)	X
Lupinus lepidus var. culbertsonii (Hockett Meadows lupine)	X
Lupinus padre-crowleyi (Father Crowley's lupine)	X
Meesia uliginosa (broad-nerved hump-moss)	X
Mentzelia inyoensis (Inyo blazing star)	X
Monardella beneolens (sweet-smelling monardella)	X
Peltigera gowardii (veined water lichen)	X
Petrophyton caespitosum ssp. acuminatum (marble rockmat)	X
Phacelia inyoensis (Inyo phacelia)	X
Phacelia monoensis (Mono County phacelia)	X
Phacelia novemmillensis (Nine Mile Canyon phacelia)	X
Pinus albicaulis (whitebark pine)	X
Plagiobothrys parishii (Parish's popcornflower)	X
Polemonium chartaceum (Mason's sky pilot)	X
Polycytenium williamsiae (Williams' combleaf)	X
Potentilla morefieldii (Morefield's cinquefoil)	X
Senecio pattersonensis (Mount Patterson senecio)	X
Streptanthus gracilis (alpine jewel-flower)	X
Streptanthus oliganthus (Masonic Mountain jewel-flower)	X
Trifolium dedeckeriae (Dedecker's clover)	X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species in Forest Service Manual (FSM) 2670.

2

sensitive species can be found

FIELD OFFICE

COMMON

Bishop

30 Specie

USDA Forest Service, Pacific Southwest Region

6/30/2013; Updated 9/9/2013

Scientific Name	Common Name	Inyo
BIRDS (12)		
<i>Accipiter gentilis</i>	Northern goshawk	X
<i>Centrocercus urophasianus</i>	Greater sage-grouse	X
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	X
<i>Empidonax traillii</i>	Willow flycatcher	X
<i>Haliaeetus leucocephalus</i>	Bald eagle	X
<i>Strix nebulosa</i>	Great gray owl	X
<i>Strix occidentalis occidentalis</i>	California spotted owl	X
MAMMALS (13)		
<i>Antrozous pallidus</i>	Pallid bat	X
<i>Brachylagus idahoensis</i>	Pygmy rabbit	X
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	X
<i>Gulo gulo luscus</i>	North American wolverine	X
<i>Martes caurina</i>	Pacific marten	X
<i>Pekania pennanti</i>	Fisher	X
<i>Myotis thysanodes</i>	Fringed myotis	X
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	?
AMPHIBIANS (21)		
<i>Anaxyrus canorus</i>	Yosemite toad	X
<i>Anaxyrus exsul</i>	Black toad	X
<i>Batrachoseps campii</i>	Inyo Mountain salamander	X
<i>Rana muscosa</i>	Mountain yellow-legged frog: Southern Sierra D	X
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog	X
REPTILES (12)		
<i>Elgaria panamintina</i>	Panamint alligator lizard	X
INVERTEBRATES, TERRESTRIAL (24)		
<i>Euphydryas editha monoensis</i>	Mono Lake checkerspot butterfly	X
<i>Plebulina emigdionis</i>	San Emigdio blue butterfly	X
<i>Speyeria nokomis apacheana</i>	Apache silverspot butterfly	X
INVERTEBRATES, AQUATIC - Mollusks (13)		
<i>Pyrgulopsis owensensis</i>	Owen's Valley springsnail	X
<i>Pyrgulopsis wongi</i>	Wong's springsnail	X
FISHES (22)		
<i>Oncorhynchus mykiss aguabonita</i>	California golden trout	X
R5 Total Sensitive Animals = 124	Total # Sensitive Animals per Forest	27
		INY

Mammal

Desert big

Fringed m

Long-eare

Mohave g

Owens Va

Pacific fis

Pallid bat

Pygmy ra

Sierra Ne

Small-foo

Spotted b

Townsen

Yuma my

Bird

Bald eagl

Bank swa

Burrowing

Golden ea

Greater s

Least Bell

Northern

Swainson

Western y

Reptile

Northern

Panamint

Amphibian

Black toa

Inyo Mou

Fish

Amargosa

Note: Common names may not always meet official standards used by various scientific organizations, but have been edited for document consistency. Only the first letter of the common name has been capitalized unless referring to a personal or geographic name.

Federal Stat
SC = State C

September-23-14

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	BLM STATUS	OTHER STATUS
Big horn sheep	<i>Ovis canadensis nelsoni</i>			BLMS	SF
Myotis	<i>Myotis thysanodes</i>			BLMS	
Lesser myotis	<i>Myotis evotis</i>			BLMS	
Ground squirrel	<i>Spermophilus mohavensis</i>		ST	BLMS	
Valley vole	<i>Microtus californicus vallicola</i>			BLMS	
Spotted skunk	<i>Martes pennanti (pacifica) DPS</i>	FC	SC	BLMS	SSC
	<i>Antrozous pallidus</i>			BLMS	SSC
Black-tailed rabbit	<i>Brachylagus idahoensis</i>			BLMS	
Nevada bighorn sheep	<i>Ovis canadensis sierrae</i>	FE	SE		SF
Least myotis	<i>Myotis ciliolabrum</i>			BLMS	
Spotted bat	<i>Euderma maculatum</i>			BLMS	SSC
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>			BLMS	SSC
Myotis	<i>Myotis yumanensis</i>			BLMS	
Golden Eagle	<i>Haliaeetus leucocephalus</i>	FD	SE	BLMS	EA
Western Kingbird	<i>Riparia riparia</i>		ST	BLMS	
Screech owl	<i>Athene cunicularia</i>			BLMS	SSC
Golden Eagle	<i>Aquila chrysaetos</i>			BLMS	EA
California quail	<i>Centrocercus urophasianus</i>	FC		BLMS	SSC
Blue-winged greenlet	<i>Vireo bellii pusillus</i>	FE	SE		
Sharp-shinned hawk	<i>Accipiter gentilis</i>			BLMS	SSC
Swainson's hawk	<i>Buteo swainsoni</i>		ST	BLMS	
Yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FC	SE	BLMS	
Spiny-tailed lizard	<i>Sceloporus graciosus graciosus</i>			BLMS	
Spiny-tailed lizard	<i>Elgaria panamintina</i>			BLMS	
Spotted salamander	<i>Anaxyrus exsul</i>		ST	BLMS	SF
Spotted salamander	<i>Batrachoseps campi</i>			BLMS	
Spotted pupfish	<i>Cyprinodon nevadensis amargosae</i>			BLMS	

Legend: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST = State Threatened, SC = State Candidate, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern

Scientific Name	Common Name	Plant Type	Family
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	VASC	Nyctaginaceae
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	VASC	Nyctaginaceae
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	VASC	Lamiaceae
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenberry oxytheca	VASC	Polygonaceae
<i>Acmispon argyraeus</i> var. <i>multicaulis</i>	scrub lotus	VASC	Fabaceae
<i>Acmispon haydonii</i>	pygmy lotus	VASC	Fabaceae
<i>Acmispon rubriflorus</i>	red-flowered bird's-foot trefoil	VASC	Fabaceae
<i>Agave utahensis</i> var. <i>eborispina</i>	ivory-spined agave	VASC	Agavaceae
<i>Agrostis blasdalei</i>	Blasdale's bent grass	VASC	Poaceae
<i>Agrostis hooveri</i>	Hoover's bent grass	VASC	Poaceae
<i>Agrostis lacuna-vernalis</i>	vernal pool bent grass	VASC	Poaceae
<i>Allium hickmanii</i>	Hickman's onion	VASC	Alliaceae
<i>Allium howellii</i> var. <i>sanbenitense</i>	San Benito onion	VASC	Alliaceae
<i>Allium jepsonii</i>	Jepson's onion	VASC	Alliaceae
<i>Allium marvinii</i>	Yucaipa onion	VASC	Alliaceae
<i>Allium munzii</i>	Munz's onion	VASC	Alliaceae
<i>Allium sharsmithiae</i>	Sharsmith's onion	VASC	Alliaceae
<i>Allium shevockii</i>	Spanish Needle onion	VASC	Alliaceae
<i>Allium tuolumnense</i>	Rawhide Hill onion	VASC	Alliaceae
<i>Ambrosia pumila</i>	San Diego ambrosia	VASC	Asteraceae
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	VASC	Boraginaceae
<i>Ancistrocarphus keilii</i>	Santa Ynez groundstar	VASC	Asteraceae
<i>Anisocarpus scabridus</i>	scabrid alpine tarplant	VASC	Asteraceae
<i>Arabis mcdonaldiana</i>	McDonald's rock-cress	VASC	Brassicaceae
<i>Arctostaphylos bakeri</i> subsp. <i>sublaevis</i>	The Cedars manzanita	VASC	Ericaceae
<i>Arctostaphylos cruzensis</i>	Arroya de La Cruz manzanita	VASC	Ericaceae
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	Gabilan Mountains manzanita	VASC	Ericaceae
<i>Arctostaphylos hookeri</i> subsp. <i>hookeri</i>	Hooker's manzanita	VASC	Ericaceae
<i>Arctostaphylos klamathensis</i>	Klamath manzanita	VASC	Ericaceae
<i>Arctostaphylos luciana</i>	Santa Lucia manzanita	VASC	Ericaceae
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	Konocti manzanita	VASC	Ericaceae
<i>Arctostaphylos montereyensis</i>	Toro manzanita	VASC	Ericaceae
<i>Arctostaphylos morroensis</i>	Morro manzanita	VASC	Ericaceae
<i>Arctostaphylos myrtifolia</i>	lone manzanita	VASC	Ericaceae
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	VASC	Ericaceae
<i>Arctostaphylos otayensis</i>	Otay manzanita	VASC	Ericaceae
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	VASC	Ericaceae
<i>Arctostaphylos pechoensis</i>	Pecho manzanita	VASC	Ericaceae
<i>Arctostaphylos pilosula</i>	Santa Margarita manzanita	VASC	Ericaceae
<i>Arctostaphylos pumila</i>	sandmat manzanita	VASC	Ericaceae

Fed Status	CA Status	CA Rare Plant Rank	NNPS	NV Status	Global Rank	State Rank	Applegate	Arcata	Bakersfield	Barstow	Bishop	Central Coast	Eagle Lake	El Centro	Mother Lode	Needles	Palm Springs	Redding	Ridgecrest	Ukiah
		1B.1			G4G5T2 S2			K												
		1B.1			G5T2? S2					K				S			K			
FT	SE	1B.1			G1 S2												S			
FE		1B.1			G4?T1 S1					K										
		1B.3			G4?T2 S2												K			
		1B.3			G3 S3									K						
		1B.1			G2 S2							S						S		S
		1B.3			G4T3 S2					K										
		1B.2			G2 S2							S								K
		1B.2			G2 S2				K											
		1B.1			G1 S1							K								
		1B.2			G2 S2							K								
		1B.3			G3G4T3 S3							K								
		1B.2			G2 S2										K		S			
		1B.2			G1 S1												K			
FE	ST	1B.1			G1 S1												S			
		1B.3			G2 S2							K								
		1B.3			G2 S2				K											K
		1B.2			G2 S2										K					
FE		1B.1			G1 S1												K			
		1B.2			G3 S3													S		K
		1B.1			G1 S1				S											
		1B.3			G2G3 S2S3													S		
FE	SE	1B.1			G3 S3				K											
	SR	1B.2			G2T2 S2															K
		1B.2			G1G2 S1S2							S								
		1B.2			G5T2 S2							S								
		1B.2			G3T2 S2							K								
		1B.2			G3 S3													S		
		1B.2			G2 S2				S											
		1B.3			G5T3 S3															K
		1B.2			G2? S2?							K								
FT		1B.1			G1 S1				K											
FT		1B.2			G1 S1										K					
		1B.2			G1 S1										K					
		1B.2			G1 S1												K			
		1B.1			G1 S1							K								
		1B.2			G2 S2				S											
		1B.2			G2? S2?				K											
		1B.2			G1 S1							K								

<i>Arctostaphylos rainbowensis</i>	rainbow manzanita	VASC	Ericaceae
<i>Arctostaphylos rudis</i>	sand mesa manzanita	VASC	Ericaceae
<i>Arctostaphylos standfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	VASC	Ericaceae
<i>Aristocapsa insignis</i>	Indian Valley spineflower	VASC	Polygonaceae
<i>Astragalus agnicidus</i>	Humboldt milk-vetch	VASC	Fabaceae
<i>Astragalus agrestis</i>	field milk-vetch	VASC	Fabaceae
<i>Astragalus albens</i>	Cushenberry milk-vetch	VASC	Fabaceae
<i>Astragalus anxius</i>	Ash Valley milk-vetch	VASC	Fabaceae
<i>Astragalus argophyllus</i> var. <i>argophyllus</i>	silverleaf milk-vetch	VASC	Fabaceae
<i>Astragalus atratus</i> var. <i>mensanus</i>	Darwin Mesa milk-vetch	VASC	Fabaceae
<i>Astragalus bernardinus</i>	San Bernardino Milk-Vetch	VASC	Fabaceae
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	VASC	Fabaceae
<i>Astragalus cimae</i> var. <i>sufflatus</i>	inflated Cima milk-vetch	VASC	Fabaceae
<i>Astragalus deanei</i>	Dean's milk-vetch	VASC	Fabaceae
<i>Astragalus douglasii</i> var. <i>perstrictus</i>	Jacumba milk-vetch	VASC	Fabaceae
<i>Astragalus erterae</i>	Walker Pass milk-vetch	VASC	Fabaceae
<i>Astragalus funereus</i>	black milk-vetch	VASC	Fabaceae
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	VASC	Fabaceae
<i>Astragalus jaegerianus</i>	Lane Mtn. milk-vetch	VASC	Fabaceae
<i>Astragalus johannis-howellii</i>	Long Valley milkvetch	VASC	Fabaceae
<i>Astragalus lemmonii</i>	Lemmon's milk-vetch	VASC	Fabaceae
<i>Astragalus lentiformis</i>	lens-pod milk-vetch	VASC	Fabaceae
<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Coachella Valley milk-vetch	VASC	Fabaceae
<i>Astragalus lentiginosus</i> var. <i>kernensis</i>	Kern Plateau milk-vetch	VASC	Fabaceae
<i>Astragalus lentiginosus</i> var. <i>piscinensis</i>	Fish Slough milk-vetch	VASC	Fabaceae
<i>Astragalus leucolobus</i>	Big Bear Valley woolypod	VASC	Fabaceae
<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	Peirson's milk-vetch	VASC	Fabaceae
<i>Astragalus mojavensis</i> var. <i>hemigyryus</i>	curved-pod milkvetch	VASC	Fabaceae
<i>Astragalus monoensis</i>	Mono milk-vetch	VASC	Fabaceae
<i>Astragalus nyensis</i>	Nye milk-vetch	VASC	Fabaceae
<i>Astragalus oocarpus</i>	San Diego milk-vetch	VASC	Fabaceae
<i>Astragalus oophorus</i> var. <i>lavinii</i>	Lavin's milk-vetch	VASC	Fabaceae
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's bush milk-vetch	VASC	Fabaceae
<i>Astragalus pseudiodanthus</i>	Tonopah milk-vetch	VASC	Fabaceae
<i>Astragalus pulsiferae</i> var. <i>pulsiferae</i>	Pulsifer's milk-vetch	VASC	Fabaceae
<i>Astragalus pulsiferae</i> var. <i>suksdorfii</i>	Suksdorf's milk-vetch	VASC	Fabaceae
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	VASC	Fabaceae
<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Jepson's milk-vetch	VASC	Fabaceae
<i>Astragalus shevockii</i>	Shevock's milk-vetch	VASC	Fabaceae
<i>Astragalus tener</i> var. <i>ferrisiae</i>	Ferris's milk-vetch	VASC	Fabaceae
<i>Astragalus tiehmii</i>	Tiehm's milk-vetch	VASC	Fabaceae
<i>Astragalus tricarinatus</i>	triple-ribbed milk-vetch	VASC	Fabaceae
<i>Astragalus webberi</i>	Webber's milk-vetch	VASC	Fabaceae
<i>Atriplex argentea</i> var. <i>longitrichoma</i>	Pahrump orache	VASC	Chenopodiaceae
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heart-leaved saltbush	VASC	Chenopodiaceae
<i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Earlimart orache	VASC	Chenopodiaceae
<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crownscale	VASC	Chenopodiaceae

<i>Atriplex coronata</i> var. <i>vallicola</i>	Lost Hills crownscale	VASC	Chenopodiaceae
<i>Atriplex flavida</i>	Carrizo Plain crownscale	VASC	Chenopodiaceae
<i>Atriplex pacifica</i>	South Coast saltscale	VASC	Chenopodiaceae
<i>Atriplex parishii</i>	Parish's brittlescale	VASC	Chenopodiaceae
<i>Atriplex subtilis</i>	subtle orache	VASC	Chenopodiaceae
<i>Baccharis vanessae</i>	Encinitas coyotebrush	VASC	Asteraceae
<i>Balsamorhiza lanata</i>	woolly balsamroot	VASC	Asteraceae
<i>Balsamorhiza macrolepis</i>	big-scale balsamroot	VASC	Asteraceae
<i>Balsamorhiza sericea</i>	silky balsamroot	VASC	Asteraceae
<i>Berberis harrisoniana</i>	Kofa Mountain barberry	VASC	Berberidaceae
<i>Berberis nevinii</i>	Nevin's barberry	VASC	Berberidaceae
<i>Bloomeria clevelandii</i>	San Diego goldenstar	VASC	Themidaceae
<i>Boechera bodiensis</i>	Bodie Hills rock cress	VASC	Brassicaceae
<i>Boechera lincolnensis</i>	Lincoln rock cress	VASC	Brassicaceae
<i>Boechera serpenticola</i>	Serpentine Rockcress	VASC	Brassicaceae
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	VASC	Themidaceae
<i>Brodiaea insignis</i>	Kaweah brodiaea	VASC	Themidaceae
<i>Brodiaea matsonii</i>	Sulphur Creek brodiaea	VASC	Themidaceae
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	VASC	Themidaceae
<i>Brodiaea rosea</i> ssp. <i>rosea</i>	Indian Valley brodiaea	VASC	Themidaceae
<i>Bryoria spiralifera</i>	twisted horsehair lichen	LICH	Parmeliaceae
<i>Bryoria tortuosa</i>	yellow-twist horsehair	LICH	Parmeliaceae
<i>Buxbaumia viridis</i>	green bug moss	BRYO	Buxbaumiaceae
<i>Calochortus clavatus</i> var. <i>avius</i>	Pleasant Valley mariposa lily	VASC	Liliaceae
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	VASC	Liliaceae
<i>Calochortus dunnii</i>	Dunn's mariposa lily	VASC	Liliaceae
<i>Calochortus excavatus</i>	Inyo mariposa	VASC	Liliaceae
<i>Calochortus fimbriatus</i>	late-flowered mariposa lily	VASC	Liliaceae
<i>Calochortus greenei</i>	Greene's mariposa	VASC	Liliaceae
<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	long-haired star-tulip	VASC	Liliaceae
<i>Calochortus monanthus</i>	Shasta River mariposa	VASC	Liliaceae
<i>Calochortus obispoensis</i>	San Luis mariposa lily	VASC	Liliaceae
<i>Calochortus palmeri</i> var. <i>munzii</i>	San Jacinto mariposa lily	VASC	Liliaceae
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa lily	VASC	Liliaceae
<i>Calochortus persistens</i>	Siskiyou mariposa lily	VASC	Liliaceae
<i>Calochortus raichei</i>	The Cedars fairy-lantern	VASC	Liliaceae
<i>Calochortus simulans</i>	La Panza mariposa lily	VASC	Liliaceae
<i>Calochortus striatus</i>	alkali mariposa lily	VASC	Liliaceae
<i>Calochortus westonii</i>	Shirley Meadows star-tulip	VASC	Liliaceae
<i>Calycadenia hooveri</i>	Hoover's calycadenia	VASC	Asteraceae
<i>Calycadenia micrantha</i>	small-flowered calycadenia	VASC	Asteraceae
<i>Calycadenia villosa</i>	dwarf calycadenia	VASC	Asteraceae
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	VASC	Montiaceae
<i>Calyptridium pulchellum</i>	Mariposa pussypaws	VASC	Montiaceae
<i>Calystegia collina</i> subsp. <i>tridactylosa</i>	three-fingered morning-glory	VASC	Convolvulaceae
<i>Calystegia purpurata</i> subsp. <i>saxicola</i>	coastal bluff morning-glory	VASC	Convolvulaceae
<i>Calystegia stebbinsii</i>	Stebbins' morning glory	VASC	Convolvulaceae

		1B.2	G4T2	S2	K	K		
		1B.3	G2G3	S2S3	K			
		1B.2	G4	S2			S	
		1B.1	G1G2	S1			S	
		1B.2	G1	S1	S			
FT	SE	1B.1	G1	S1			K	
		1B.2	G3	S3			K	
		1B.2	G2	S2		K	K	K
		1B.3	G4Q	S3			S	
		1B.2	G1G2	S1		K		
FE	SE	1B.1	G1	S1			K	
		1B.1	G2	S2			K	
		1B.3	G2	S2		K		
		2B.3	G4?	S2				K
		1B.2	G1	S1			S	
FT	SE	1B.1	G1	S1			K	
	SE	1B.2	G1	S1	S			
		1B.1	G1	S1			K	
		1B.1	G2	S2		K	K	
	SE	3.1	G2	S2			K	K
		1B.1	G3	S1S2	K			
			G5	S2			K	
		2.2	G4G5	S2			S	
		1B.2	G4T2	S2			S	
		1B.2	G4T2T3	S2S3			S	
SR		1B.2	G2G3	S2S3		K	K	
		1B.1	G2	S2		K		S
		1B.3	G3	S3	S			
		1B.2	G3	S3			K	
		1B.2	G4T3	S3	S		S	
		1A	GH	SH			S	
		1B.2	G2	S2	S			
		1B.2	G3T3	S3			K	
		1B.2	G3T2	S2	K	K	S	K
FC	SR	1B.2	G1	S1			S	
		1B.2	G2	S2				K
		1B.3	G2	S2	K			
		1B.2	G3	S3	K	S		S
		1B.2	G2	S2	K			
		1B.3	G2	S2			S	
		1B.2	G2	S2				S
		1B.1	G3	S3	S			
		1B.1	G3G4T2	S2		K		
FT		1B.1	G1	S1	S		S	
		1B.2	G4T1	S1	K			K
		1B.2	G4T2T3	S2S3				K
FE	SE	1B.1	G1	S1			K	

<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	VASC	Convolvulaceae
<i>Camissonia benitensis</i>	San Benito evening-primrose	VASC	Onagraceae
<i>Camissonia integrifolia</i>	Kern River evening-primrose	VASC	Onagraceae
<i>Camissoniopsis hardhamiae</i>	Hardham's evening-primrose	VASC	Onagraceae
<i>Campanula californica</i>	swamp harebell	VASC	Campanulaceae
<i>Campanula exigua</i>	chaparral harebell	VASC	Campanulaceae
<i>Campanula sharsmithiae</i>	Sharsmith's harebell	VASC	Campanulaceae
<i>Campanula shetleri</i>	Castle Crags harebell	VASC	Campanulaceae
<i>Carex klamathensis</i>	Klamath sedge	VASC	Cyperaceae
<i>Carex obispoensis</i>	San Luis Obispo sedge	VASC	Cyperaceae
<i>Carex saliniformis</i>	deceiving sedge	VASC	Cyperaceae
<i>Carex xerophila</i>	chaparral sedge	VASC	Cyperaceae
<i>Carlquistia muirii</i>	Muir's raillardella	VASC	Asteraceae
<i>Carpenteria californica</i>	tree-anemone	VASC	Hydrangeaceae
<i>Castilleja ambigua</i> subsp. <i>insalutata</i>	pink Johnny-nip	VASC	Orobanchaceae
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	Humboldt Bay owl's-clover	VASC	Orobanchaceae
<i>Castilleja campestris</i> subsp. <i>succulenta</i>	succulent owl's clover	VASC	Orobanchaceae
<i>Castilleja densiflora</i> subsp. <i>obispoensis</i>	Obispo Indian paintbrush	VASC	Orobanchaceae
<i>Castilleja gleasoni</i>	Mt. Gleason Indian paintbrush	VASC	Orobanchaceae
<i>Castilleja mendocinensis</i>	Mendocino Coast paintbrush	VASC	Orobanchaceae
<i>Castilleja rubicundula</i> subsp. <i>rubicundula</i>	pink creamsacs	VASC	Orobanchaceae
<i>Caulanthus californicus</i>	California jewelflower	VASC	Brassicaceae
<i>Caulanthus lemmonii</i>	Lemmon's jewelflower	VASC	Brassicaceae
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	VASC	Rhamnaceae
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	VASC	Rhamnaceae
<i>Ceanothus divergens</i>	Calistoga ceanothus	VASC	Rhamnaceae
<i>Ceanothus otayensis</i>	Otay Mountain ceanothus	VASC	Rhamnaceae
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	VASC	Rhamnaceae
<i>Centromadia parryi</i> subsp. <i>congdonii</i>	Congdon's tarplant	VASC	Asteraceae
<i>Centromadia parryi</i> subsp. <i>parryi</i>	pappose tarplant	VASC	Asteraceae
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	VASC	Asteraceae
<i>Chaenactis carphoclinia</i> var. <i>peirsonii</i>	Peirson's pincushion	VASC	Asteraceae
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	VASC	Asteraceae
<i>Chaenactis parishii</i>	Parish's chaenactis	VASC	Asteraceae
<i>Chaenactis suffrutescens</i>	Shasta chaenactis	VASC	Asteraceae
<i>Chamaesyce hooveri</i>	Hoover's spurge	VASC	Euphorbiaceae
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	VASC	Agavaceae
<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	dwarf soaproot	VASC	Agavaceae
<i>Chlorogalum purpureum</i> var. <i>purpureum</i>	purple amole	VASC	Agavaceae
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	VASC	Orobanchaceae
<i>Chloropyron maritimum</i> subsp. <i>palustre</i>	Pt. Reyes birds-beak	VASC	Orobanchaceae
<i>Chloropyron molle</i> subsp. <i>hispidum</i>	hispid bird's-beak	VASC	Orobanchaceae
<i>Chloropyron tecopense</i>	Tecopa bird's-beak	VASC	Orobanchaceae
<i>Chorizanthe aphanantha</i>	Irish Hills spineflower	VASC	Polygonaceae
<i>Chorizanthe biloba</i> var. <i>immemora</i>	Hernandez spineflower	VASC	Polygonaceae
<i>Chorizanthe blakleyi</i>	Blakley's spineflower	VASC	Polygonaceae
<i>Chorizanthe breweri</i>	Brewer's spineflower	VASC	Polygonaceae

		1B.3	G2Q	S2					K
FD		1B.1	G2	S2					K
		1B.3	G2	S2		S			K
		1B.2	G1Q	S1		K	S		
		1B.2	G3	S3					K
		1B.2	G2	S2				K	
		1B.2	G1	S1			S		
		1B.3	G2	S2					S
		1B.2	G2	S2					S
		1B.2	G2G3	S2S3		K			
		1B.2	G2	S2					S
		1B.2	G2	S2				K	
		1B.3	G2	S2		K			K
ST		1B.2	G1?	S1?		S			
		1B.1	G4T2	S2				K	
		1B.2	G4T2	S2		K			K
FT	SE	1B.2	G4?T2	S2		K			
		1B.2	G5T2	S2		S			
	SR	1B.2	G2	S2					S
		1B.2	G2	S2		S			K
		1B.2	G5T2	S2					S K
FE	SE	1B.1	G1	S1		K	K		
		1B.2	G3	S3		K			
		1B.2	G1	S1					K
		1B.2	G2	S2					K
		1B.2	G2	S2					K
		1B.2	G1	S1					K
FE	SR	1B.2	G1	S1					K
		1B.1	G3T2	S2				K	
		1B.2	G3T1	S1					K
		1B.1	G3G4T2	S2					S
		1B.3	G5T2	S2				K	
		1B.1	G5T1	S1				S	
		1B.3	G3G4	S3				K	
		1B.3	G3	S3					K
FT		1B.2	G2	S2					S
		1B.2	G3	S3					K
		1B.2	G5T3	S3					K S
FT		1B.1	G2T2	S2		S	S		
		1B.2	G4?T1	S1					S
		1B.2	G4?T2	S2		K			
		1B.1	G2T1	S1		S	S		
		1B.2	G2	S1			K		
		1B.1	G1	S1		K			
		1B.2	G3T1?	S1?				K	
		1B.3	G2	S2		K			
		1B.3	G2	S2		K			

<i>Chorizanthe minutiflora</i>	Fort Ord spineflower	VASC	Polygonaceae
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	VASC	Polygonaceae
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	VASC	Polygonaceae
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	VASC	Polygonaceae
<i>Chorizanthe rectispina</i>	straight-awned spineflower	VASC	Polygonaceae
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	VASC	Polygonaceae
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	VASC	Polygonaceae
<i>Cirsium ciliolatum</i>	Ashland thistle	VASC	Asteraceae
<i>Cirsium crassicaule</i>	slough thistle	VASC	Asteraceae
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	VASC	Asteraceae
<i>Cirsium fontinale</i> var. <i>obispoense</i>	Chorro Creek bog thistle	VASC	Asteraceae
<i>Cirsium occidentale</i> var. <i>lucianum</i>	Cuesta Ridge thistle	VASC	Asteraceae
<i>Cirsium occidentale</i> var. <i>compactum</i>	compact cobwebby thistle	VASC	Asteraceae
<i>Cirsium rhotophilum</i>	surf thistle	VASC	Asteraceae
<i>Cirsium scariosum</i> var. <i>loncholepis</i>	La Graciosa thistle	VASC	Asteraceae
<i>Clarkia amoena</i> ssp. <i>whitneyi</i>	Whitney's farewell-to-spring	VASC	Onagraceae
<i>Clarkia australis</i>	Small's southern clarkia	VASC	Onagraceae
<i>Clarkia biloba</i> ssp. <i>Australis</i>	Mariposa clarkia	VASC	Onagraceae
<i>Clarkia borealis</i> subsp. <i>arida</i>	Shasta clarkia	VASC	Onagraceae
<i>Clarkia delicata</i>	delicate clarkia	VASC	Onagraceae
<i>Clarkia gracilis</i> subsp. <i>albicaulis</i>	white-stemmed clarkia	VASC	Onagraceae
<i>Clarkia mildrediae</i> subsp. <i>mildrediae</i>	Mildred's clarkia	VASC	Onagraceae
<i>Clarkia mosquinii</i>	Mosquin's clarkia	VASC	Onagraceae
<i>Clarkia rostrata</i>	beaked clarkia	VASC	Onagraceae
<i>Clarkia springvillensis</i>	Springville clarkia	VASC	Onagraceae
<i>Clarkia tembloriensis</i> subsp. <i>calientensis</i>	Vasek's clarkia	VASC	Onagraceae
<i>Claytonia peirsonii</i> ssp. <i>Yorkii</i>	York's spring beauty	VASC	Montiaceae
<i>Clinopodium chandleri</i>	San Miguel savory	VASC	Lamiaceae
<i>Collinsia antonina</i>	San Antonio collinsia	VASC	Plantaginaceae
<i>Collinsia multicolor</i>	San Francisco collinsia	VASC	Plantaginaceae
<i>Comarostaphylis diversifolia</i> subsp. <i>diversifolia</i>	summer holly	VASC	Rhamnaceae
<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i>	Kern Plateau bird's-beak	VASC	Orobanchaceae
<i>Cordylanthus rigidus</i> subsp. <i>littoralis</i>	seaside bird's-beak	VASC	Orobanchaceae
<i>Cordylanthus tenuis</i> subsp. <i>pallescens</i>	pallid bird's-beak	VASC	Orobanchaceae
<i>Croton wigginsii</i>	Wiggins' croton	VASC	Euphorbiaceae
<i>Cryptantha clokeyi</i>	Clokey's cryptantha	VASC	Boraginaceae
<i>Cryptantha crinita</i>	silky cryptantha	VASC	Boraginaceae
<i>Cryptantha dissita</i>	serpentine cryptantha	VASC	Boraginaceae
<i>Cryptantha excavata</i>	deep-scarred cryptantha	VASC	Boraginaceae
<i>Cryptantha ganderi</i>	Gander's cryptantha	VASC	Boraginaceae
<i>Cryptantha mariposae</i>	Mariposa cryptantha	VASC	Boraginaceae
<i>Cryptantha schoolcraftii</i>	Schoolcraft's cryptantha	VASC	Boraginaceae
<i>Cryptantha spithamaea</i>	Red Hills cryptantha	VASC	Boraginaceae
<i>Cusickiella quadricostata</i>	Bodie Hills cusickiella	VASC	Brassicaceae
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	VASC	Cactaceae
<i>Cylindropuntia fosbergii</i>	pink teddy-bear cholla	VASC	Cactaceae
<i>Cylindropuntia munzii</i>	Munz cholla	VASC	Cactaceae

	1B.2		G1	S1			K	
	1B.1		G3T3	S3				K
	1B.2		G5T3	S3		S		K
FT	1B.2		G2T2	S2			K	
	1B.3		G1	S1		K	K	
FE	1B.1		G2T1	S1			S	
	1B.2		G4T3	S3		S		K
SE	2B.1		G3	S1				S
	1B.1		G2	S2		S		
	1B.2		G2T2	S2			S	
FE SE	1B.2		G2T2	S2		S		
	1B.2		G3G4T2	S2		S		
	1B.2		G3G4T2	S2		K		
ST	1B.2		G1	S1		K		
FE ST	1B.1		G5T1	S1		S		
	1B.1		G5T1	S1		S		
	1B.2		G2	S2		K		
	1B.2		G4G5T3	S3				K
	1B.1		G3T2	S2				K
	1B.2		G3	S3		K		K
	1B.2		G5T2	S2				K
	1B.3		G3T3	S3				S
	1B.1		G2	S2				K
	1B.3		G3	S3			K	
FT SE	1B.2		G2	S2		K		
	1B.1		G3T1	S1		S		
	1B.1		G2G3T1	S1				K
	1B.2		G2	S2				K
	1B.2		G1	S1			S	
	1B.2		G2	S2			S	
	1B.2		G3T2	S2				K
	1B.3		G3T2	S2		K		S
SE	1B.1		G5T2	S2		K	K	
	1B.2		G4G5T1	S1				S
SR	2B.2		G2G3	S2			K	
	1B.2		G3	S3		K		S
	1B.2		G2	S2				K
	1B.2		G2	S2		S		K
	1B.3		G1	S1				K
	1B.1		G1G2	S1				S
	1B.3		G2G3	S2S3		S		K
	2B.2	W	G3	S1 (CA); S3 (NV)		K		
	1B.3		G2	S2				K
	1B.2		G3	S2		K		
	1B.1		G3T2	S1				S
	1B.3		G2	S2			K	
	1B.3		G3	S1			K	K

<i>Cymopterus deserticola</i>	desert cymopterus	VASC	Apiaceae
<i>Cymopterus ripleyi</i> var. <i>saniculoides</i>	Ripley's cymopterus	VASC	Apiaceae
<i>Cypripedium fasciculatum</i>	clustered lady's slipper	VASC	Orchidaceae
<i>Cypripedium montanum</i>	mountain lady's slipper	VASC	Orchidaceae
<i>Dalea ornata</i>	ornate dalea	VASC	Fabaceae
<i>Dedeckera eurekaensis</i>	July gold	VASC	Polygonaceae
<i>Deinandra arida</i>	Red Rock tarplant	VASC	Asteraceae
<i>Deinandra conjugens</i>	Otay tarplant	VASC	Asteraceae
<i>Deinandra floribunda</i>	Tecate tarplant	VASC	Asteraceae
<i>Deinandra halliana</i>	Hall's tarplant	VASC	Asteraceae
<i>Deinandra increscens</i> subsp. <i>villosa</i>	Gaviota tarplant	VASC	Asteraceae
<i>Deinandra minthornii</i>	Santa Suzana tarplant	VASC	Asteraceae
<i>Deinandra mohavensis</i>	Mojave tarplant	VASC	Asteraceae
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	VASC	Ranunculaceae
<i>Delphinium hesperium</i> subsp. <i>cuyamaca</i>	Cuyamaca larkspur	VASC	Ranunculaceae
<i>Delphinium parryi</i> ssp. <i>eastwoodiae</i>	Eastwood's larkspur	VASC	Ranunculaceae
<i>Delphinium parryi</i> subsp. <i>blochmaniae</i>	dune larkspur	VASC	Ranunculaceae
<i>Delphinium purpusii</i>	Kern County Larkspur	VASC	Ranunculaceae
<i>Delphinium recurvatum</i>	recurved larkspur	VASC	Ranunculaceae
<i>Delphinium umbraculorum</i>	umbrella larkspur	VASC	Ranunculaceae
<i>Dendriscoaulon intricatum</i>	northern moon shrub	LICH	Lobariaceae
<i>Dendrocollybia racemosa</i>	no common name	FUNG	Tricholomataceae
<i>Dieteria asteroides</i> var. <i>lagunensis</i>	Mount Laguna aster	VASC	Asteraceae
<i>Diplacus mohavensis</i>	Mojave monkeyflower	VASC	Phrymaceae
<i>Diplacus pictus</i>	Calico monkeyflower	VASC	Phrymaceae
<i>Diplacus pulchellus</i>	yellow-lip pansy monkeyflower	VASC	Phrymaceae
<i>Dithyrea maritima</i>	beach spectaclepod	VASC	Brassicaceae
<i>Dodecahema leptoceras</i>	slender-horned spineflower	VASC	Polygonaceae
<i>Dudleya abramsii</i> ssp. <i>affinis</i>	San Bernardino Mountains dudleya	VASC	Crassulaceae
<i>Dudleya abramsii</i> subsp. <i>murina</i>	mouse-gray dudleya	VASC	Crassulaceae
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	VASC	Crassulaceae
<i>Dudleya multicaulis</i>	many-stemmed dudleya	VASC	Crassulaceae
<i>Dudleya saxosa</i> subsp. <i>saxosa</i>	Panamint dudleya	VASC	Crassulaceae
<i>Dudleya variegata</i>	variegated dudleya	VASC	Crassulaceae
<i>Dudleya viscida</i>	sticky dudleya	VASC	Crassulaceae
<i>Echinocereus engelmannii</i> var. <i>howei</i>	Howe's hedgehog cactus	VASC	Cactaceae
<i>Enceliopsis covillei</i>	Panamint daisy	VASC	Asteraceae
<i>Entosthodon kochii</i>	Koch's cord moss	BRYO	Funariaceae
<i>Epilobium nivium</i>	Snow Mountain willowherb	VASC	Onagraceae
<i>Epilobium oreganum</i>	Oregon fireweed	VASC	Onagraceae
<i>Epilobium siskiyouense</i>	Siskiyou fireweed	VASC	Onagraceae
<i>Eremalche kernensis</i>	Kern mallow	VASC	Malvaceae
<i>Eriastrum brandegeae</i>	Brandegee's eriastrum	VASC	Polemoniaceae
<i>Eriastrum densifolium</i> subsp. <i>sanctorum</i>	Santa Ana River woollystar	VASC	Polemoniaceae
<i>Eriastrum harwoodii</i>	Harwood's eriastrum	VASC	Polemoniaceae
<i>Eriastrum luteum</i>	yellow-flowered eriastrum	VASC	Polemoniaceae
<i>Ericameria cuneata</i> var. <i>macrocephala</i>	Laguna Mountains goldenbush	VASC	Asteraceae

		1B.2	G2	S2		K			K
		1B.2	G3G4T3Q	S1					K
		4.2	G4	S4					K
		4.2	G4	S4					K
		2B.1	G4G5	S2			K		
	SR	1B.3	G3	S3		K			K
		1B.2	G1	S1					S
FT	SE	1B.1	G1	S1					S
		1B.2	G2	S2			K		K
		1B.1	G2	S2	S	K			
FE	SE	1B.1	G4G5T2	S2	S				
	SR	1B.2	G2	S2					S
	SE	1B.3	G2G3	S2S3	K	S		K	K
		1B.2	G3T3	S3			S		
	SR	1B.2	G4T2	S2			S		S
		1B.2	G4T2	S2	S				
		1B.2	G4T2	S2	S				
		1B.3	G2	S2	K				
		1B.2	G3	S3	K	K			
		1B.3	G3	S3	K				
			G3G4Q	S1	S				K
			G4	None					S
	SR	2B.1	G5T2T3Q	S1			K		
		1B.2	G2	S2		K			
		1B.2	G2	S2	K				
		1B.2	G2	S2			K		
	ST	1B.1	G2	S1	S				
FE	SE	1B.1	G1	S1					K
		1B.2	G4T2	S2		K			
		1B.3	G4T2	S2	K				
		1B.1	G3T2	S2	S				
		1B.2	G2	S2					S
		1B.3	G4T3	S3					K
		1B.2	G2	S2					K
		1B.2	G2	S2					K
		1B.1	G5T1	S1			K		
		1B.2	G2?	S2?					K
		1B.3	G1	S1			K		
		1B.1	G2G3	S2S3	K				
		1B.2	G2	S2					S
		1B.3	G3	S3					S
FE		1B.1	G3?T2Q	S2	K				
		1B.1	G1Q	S1					K S
FE	SE	1B.1	G4T1	S1					K
		1B.2	G2	S2		K		K	K
		1B.2	G2	S2	K				
		1B.3	G5T2T3	S2S3			K		

<i>Ericameria fasciculata</i>	Eastwood's goldenbush	VASC	Asteraceae
<i>Ericameria gilmanii</i>	Gilman's goldenbush	VASC	Asteraceae
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldernbush	VASC	Asteraceae
<i>Erigeron aequifolius</i>	Hall's daisy	VASC	Asteraceae
<i>Erigeron blochmaniae</i>	Blochman's leafy daisy	VASC	Asteraceae
<i>Erigeron calvus</i>	bald daisy	VASC	Asteraceae
<i>Erigeron greenei</i>	Greene's narrow-leaved daisy	VASC	Asteraceae
<i>Erigeron maniopotamicus</i>	Mad River fleabane daisy	VASC	Asteraceae
<i>Erigeron multiceps</i>	Kern River daisy	VASC	Asteraceae
<i>Erigeron parishii</i>	Parish's daisy	VASC	Asteraceae
<i>Erigeron serpentinus</i>	serpentine daisy	VASC	Asteraceae
<i>Erigeron supplex</i>	supple daisy	VASC	Asteraceae
<i>Erigeron uncialis</i> var. <i>uncialis</i>	limestone daisy	VASC	Asteraceae
<i>Eriogonum alexandrae</i>	Alexander's buckwheat	VASC	Polygonaceae
<i>Eriogonum apricum</i> var. <i>apricum</i>	lone buckwheat	VASC	Polygonaceae
<i>Eriogonum bifurcatum</i>	forked buckwheat	VASC	Polygonaceae
<i>Eriogonum butterworthianum</i>	Butterworth's buckwheat	VASC	Polygonaceae
<i>Eriogonum cedrorum</i>	The Cedars buckwheat	VASC	Polygonaceae
<i>Eriogonum contiguum</i>	Reveal's buckwheat	VASC	Polygonaceae
<i>Eriogonum crosbyae</i>	Crosby's buckwheat	VASC	Polygonaceae
<i>Eriogonum eremicola</i>	Wildrose Canyon buckwheat	VASC	Polygonaceae
<i>Eriogonum heermannii</i> var. <i>occidentale</i>	western Heermann's buckwheat	VASC	Polygonaceae
<i>Eriogonum hoffmannii</i> var. <i>hoffmannii</i>	Hoffmann's buckwheat	VASC	Polygonaceae
<i>Eriogonum hoffmannii</i> var. <i>robustus</i>	robust Hoffmann's buckwheat	VASC	Polygonaceae
<i>Eriogonum kelloggii</i>	Red Mountain buckwheat	VASC	Polygonaceae
<i>Eriogonum kennedyi</i> var. <i>pinicola</i>	Kern buckwheat	VASC	Polygonaceae
<i>Eriogonum mensicola</i>	Pinyon Mesa buckwheat	VASC	Polygonaceae
<i>Eriogonum microthecum</i> var. <i>panamintense</i>	Panamint Mountains buckwheat	VASC	Polygonaceae
<i>Eriogonum microthecum</i> var. <i>schoolcraftii</i>	Schoolcraft's wild buckwheat	VASC	Polygonaceae
<i>Eriogonum nervulosum</i>	Snow Mtn. buckwheat	VASC	Polygonaceae
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	VASC	Polygonaceae
<i>Eriogonum nudum</i> var. <i>murinum</i>	mouse buckwheat	VASC	Polygonaceae
<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Cushenberry buckwheat	VASC	Polygonaceae
<i>Eriogonum prociduum</i>	prostrate buckwheat	VASC	Polygonaceae
<i>Eriogonum temblorense</i>	Temblor buckwheat	VASC	Polygonaceae
<i>Eriogonum umbellatum</i> var. <i>ahartii</i>	Ahart's buckwheat	VASC	Polygonaceae
<i>Eriogonum umbellatum</i> var. <i>glaberrimum</i>	green buckwheat	VASC	Polygonaceae
<i>Eriogonum ursinum</i> var. <i>erubescens</i>	blushing wild buckwheat	VASC	Polygonaceae
<i>Eriophyllum mohavense</i>	Barstow woolly-sunflower	VASC	Asteraceae
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	VASC	Apiaceae
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	VASC	Apiaceae
<i>Erysimum ammophilum</i>	coast wallflower	VASC	Brassicaceae
<i>Erysimum concinnum</i>	bluff wallflower	VASC	Brassicaceae
<i>Erysimum menziesii</i>	Menzies' wallflower	VASC	Brassicaceae
<i>Erythranthe calcicola</i>	limestone monkeyflower	VASC	Phrymaceae
<i>Erythranthe filicaulis</i>	slender-stemmed monkeyflower	VASC	Phrymaceae
<i>Erythranthe inflatula</i>	ephemeral monkeyflower	VASC	Phrymaceae

	1B.1		G2	S2				K	
	1B.3		G2	S2			K		S
	1B.1		G4T2T3	S1					S
	1B.3		G3	S3					K
	1B.2		G2	S2			K		
	1B.1		G1Q	S1				S	
	1B.2		G3	S3					K
	1B.2		G2?	S2?			S		
	1B.2		G2	S2				S	
FT	1B.1		G2	S2				K	
	1B.3		G2	S2					K
	1B.2		G2	S2					S
	1B.2		G3G4T2	S2					S
	1B.1		G3Q	S1				S	
FE SE	1B.1		G1T1	S1					K
	1B.2		G3	S3			K		K
SR	1B.3		G2	S2				S	
	1B.3		G1	S1					K
	2B.3		G2	S2					K
		W	G3	S3			K		
	1B.3		G1	S1				S	K
	1B.2		G5T2	S2				K	
	1B.3		G3T2	S2					K
	1B.3		G3T3	S3			K		
SE	1B.2		G2	S2			K		
	1B.1		G4T1	S1			S		K
	1B.3		G3	S3				S	K
	1B.3		G5T3	S3				K	K
	1B.2	W	G5T3 in CA; S3 (CA); S1 (NV)			S			K
	1B.2		G2	S2					K
	1B.3		G2	S2				K	
	1B.2		G5T2	S2			K		
FE	1B.1		G5T1	S1				K	
	1B.2	W	S1	G3	S3 (CA); S1 (NV)		K		K
	1B.2		G2	S2.2			K		
	1B.2		G5T2	S2					S
	1B.3		G5T2?	S2			S		
	1B.3		G3G4T2	S2					S
	1B.2		G2	S2			K		K
FE SE	1B.1		G5T1	S1					S
	1B.2		G2	S2			K		
	1B.2		G2	S2				S	
	1B.2		G3	S3			K		
FE SE	1B.1		G1	S1			K		
	1B.3		G2	S2					K
	1B.2		G2	S2				K	
	1B.2		G3	S2			K		S

<i>Erythranthe marmorata</i>	Stanislaus monkeyflower	VASC	Phrymaceae
<i>Erythranthe norrisii</i>	Kaweah monkeyflower	VASC	Phrymaceae
<i>Erythranthe rhodopetra</i>	Red Rock Canyon monkeyflower	VASC	Phrymaceae
<i>Erythranthe shevockii</i>	Kelso Creek monkeyflower	VASC	Phrymaceae
<i>Erythronium tuolumnense</i>	Tuolumne fawn-lily	VASC	Liliaceae
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	Tejon poppy	VASC	Papaveraceae
<i>Eschscholzia minutiflora</i> subsp. <i>twisselmannii</i>	Red Rock poppy	VASC	Papaveraceae
<i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	VASC	Papaveraceae
<i>Euphorbia jaegeri</i>	Orocopia Mountains spurge	VASC	Euphorbiaceae
<i>Euphorbia ocellata</i> subsp. <i>rattanii</i>	Stony Creek spurge	VASC	Euphorbiaceae
<i>Euphorbia platysperma</i>	flat-seeded spurge	VASC	Euphorbiaceae
<i>Extriplex joaquinana</i>	San Joaquin spearscale	VASC	Chenopodiaceae
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	VASC	Malvaceae
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	VASC	Malvaceae
<i>Fritillaria brandegeei</i>	Greenhorn fritillary	VASC	Liliaceae
<i>Fritillaria falcata</i>	talus fritillary	VASC	Liliaceae
<i>Fritillaria gentneri</i>	Gentner's fritillaria	VASC	Liliaceae
<i>Fritillaria ojaiensis</i>	Ojai fritillary	VASC	Liliaceae
<i>Fritillaria pluriflora</i>	adobe-lily	VASC	Liliaceae
<i>Fritillaria striata</i>	striped adobe-lily	VASC	Liliaceae
<i>Fritillaria viridea</i>	San Benito fritillary	VASC	Liliaceae
<i>Galium angustifolium</i> ssp. <i>borregoense</i>	Borrego bedstraw	VASC	Rubiaceae
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto Mountains bedstraw	VASC	Rubiaceae
<i>Galium angustifolium</i> subsp. <i>onycense</i>	Onyx Peak bedstraw	VASC	Rubiaceae
<i>Galium californicum</i> subsp. <i>primum</i>	Alvin Meadow bedstraw	VASC	Rubiaceae
<i>Galium californicum</i> subsp. <i>sierrae</i>	El Dorado bedstraw	VASC	Rubiaceae
<i>Galium glabrescens</i> subsp. <i>modocense</i>	Modoc bedstraw	VASC	Rubiaceae
<i>Galium grande</i>	San Gabriel bedstraw	VASC	Rubiaceae
<i>Galium hardhamiae</i>	Hardham's bedstraw	VASC	Rubiaceae
<i>Galium hilendiae</i> subsp. <i>kingstonense</i>	Kingston bedstraw	VASC	Rubiaceae
<i>Galium serpenticum</i> subsp. <i>scotticum</i>	Scott Mtn. bedstraw	VASC	Rubiaceae
<i>Galium serpenticum</i> subsp. <i>warnerense</i>	Warner Mtns. bedstraw	VASC	Rubiaceae
<i>Gentiana setigera</i>	Mendocino gentian	VASC	Gentianaceae
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	VASC	Polemoniaceae
<i>Gilia millefoliata</i>	dark-eyed gilia	VASC	Polemoniaceae
<i>Gilia tenuiflora</i> subsp. <i>arenaria</i>	sand gilia	VASC	Polemoniaceae
<i>Githopsis tenella</i>	delicate bluecup	VASC	Campanulaceae
<i>Glossopetalon pungens</i>	pungent glossopetalon	VASC	Crossosomataceae
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	VASC	Plantaginaceae
<i>Grimmia torenii</i>	Toren's grimmia	BRYO	Grimmiaceae
<i>Grimmia vaginulata</i>	vaginulate grimmia	BRYO	Grimmiaceae
<i>Grindelia fraxinipratensis</i>	Ash Meadows gum-plant	VASC	Asteraceae
<i>Grindelia hallii</i>	San Diego gumplant	VASC	Asteraceae
<i>Harmonia doris-nilesiae</i>	Niles's harmonia	VASC	Asteraceae
<i>Harmonia hallii</i>	Hall's harmonia	VASC	Asteraceae
<i>Harmonia stebbinsii</i>	Stebbins's harmonia	VASC	Asteraceae
<i>Helianthella castanea</i>	Diablo rock-rose	VASC	Asteraceae

		1B.1	GXQ	SX					S
		1B.3	G2	S2		K			
		1B.1	G1	S1					K
		1B.1	G2	S2		K			K
		1B.2	G2	S2				K	
		1B.1	G5T2	S2		K			
		1B.2	G5T2	S2					K
		1B.1	G1	S1		S			
		1B.1	G1	S1				K	K
		1B.2	G4T1T2	S1S2					K
		1B.2	G3	S1		S		S	
		1B.2	G2	S2					K
FE	SR	1B.2	G1	S1				K	
FE	SR	1B.1	G1	S1				K	K
		1B.3	G2G3	S2S3		S			
		1B.2	G2	S2				K	
FE		1B.1	G1	S1					K
		1B.2	G2	S2		K			
		1B.2	G3	S3					S K
ST		1B.1	G2	S2		S			
		1B.2	G2	S2				K	
SR		1B.3	G5T3?	S3?				K	
		1B.3	G5T2?	S2?				K	
		1B.3	G5T3	S3		K			
		1B.2	G5T1Q	S1					S
FE	SR	1B.2	G5T1	S1				K	
		1B.2	G4T3	S3		K			
		1B.2	G2	S2					S
		1B.3	G3	S3		K			
		1B.3	G4T2	S2		K		K	
		1B.2	G4G5T2	S2.2					K
		1B.2	G4G5T2	S2		S			
		1B.2	G2	S1		K			
		1B.2	G5T3	S2		K			S
		1B.2	G2	S2		K			
FE	ST	1B.2	G3G4T2	S2				K	
		1B.3	G2	S2				K	
e		1B.2	G2G3	S1					K
	SE	1B.2	G2	S2		K	K	K	K K
		1B.3	G2	S2					K
		1B.1	G2G3	S1				K	
FT		1B.2	CE G2	S1		K			
		1B.2	G2	S2				K	
		1B.1	G2	S2					S
		1B.2	G2	S2?					K
		1B.2	G2	S2					K
		1B.2	G2	S2				S	

<i>Helianthus niveus</i> subsp. <i>tephrodes</i>	Algodones Dunes sunflower	VASC	Asteraceae
<i>Helianthus winteri</i>	Winter's sunflower	VASC	Asteraceae
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	VASC	Asteraceae
<i>Hesperidanthus jaegeri</i>	Jaeger's hesperidanthus	VASC	Brassicaceae
<i>Hesperocyparis forbesii</i>	Tecate cypress	VASC	Cupressaceae
<i>Hesperocyparis nevadensis</i>	Piute cypress	VASC	Cupressaceae
<i>Hesperocyparis pygmaea</i>	pygmy cypress	VASC	Cupressaceae
<i>Hesperolinon adenophyllum</i>	glandular western flax	VASC	Linaceae
<i>Hesperolinon bicarpellatum</i>	two-carpellate western flax	VASC	Linaceae
<i>Hesperolinon breweri</i>	Brewer's dwarf flax	VASC	Linaceae
<i>Hesperolinon didymocarpum</i>	Lake County dwarf flax	VASC	Linaceae
<i>Hesperolinon drymarioides</i>	drymaria-like western flax	VASC	Linaceae
<i>Hesperolinon sharsmithiae</i>	Sharsmith's western flax	VASC	Linaceae
<i>Hesperolinon tehamense</i>	Tehama County western flax	VASC	Linaceae
<i>Heterotheca shevockii</i>	Shevock's golden-aster	VASC	Asteraceae
<i>Heuchera brevistaminea</i>	Laguna Mountains alumroot	VASC	Saxifragaceae
<i>Horkelia bolanderi</i>	Bolander's horkelia	VASC	Rosaceae
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	VASC	Rosaceae
<i>Horkelia hendersonii</i>	Henderson's horkelia	VASC	Rosaceae
<i>Horkelia marinensis</i>	Point Reyes horkelia	VASC	Rosaceae
<i>Horkelia parryi</i>	Parry's horkelia	VASC	Rosaceae
<i>Horkelia tenuiloba</i>	thin-lobed horkelia	VASC	Rosaceae
<i>Horkelia truncata</i>	Ramona horkelia	VASC	Rosaceae
<i>Hosackia crassifolia</i> var. <i>otayensis</i>	Otay Mountain lotus	VASC	Fabaceae
<i>Hulsea californica</i>	San Diego sunflower	VASC	Asteraceae
<i>Iris hartwegii</i> ssp. <i>columbiana</i>	Tuolumne iris	VASC	Iridaceae
<i>Iris munzii</i>	Munz's iris	VASC	Iridaceae
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	VASC	Asteraceae
<i>Ivesia aperta</i> var. <i>aperta</i>	Sierra Valley ivesia	VASC	Rosaceae
<i>Ivesia jaegeri</i>	Jaeger's ivesia	VASC	Rosaceae
<i>Ivesia kingii</i> var. <i>kingii</i>	alkali ivesia	VASC	Rosaceae
<i>Ivesia longibracteata</i>	Castle Crags ivesia	VASC	Rosaceae
<i>Ivesia paniculata</i>	Ash Creek ivesia	VASC	Rosaceae
<i>Ivesia patellifera</i>	Kingston Mtns. ivesia	VASC	Rosaceae
<i>Ivesia pickeringii</i>	Pickering's ivesia	VASC	Rosaceae
<i>Ivesia rhypara</i> var. <i>rhypara</i>	grimy ivesia	VASC	Rosaceae
<i>Ivesia sericoleuca</i>	Plumas ivesia	VASC	Rosaceae
<i>Ivesia webberi</i>	Webber's ivesia	VASC	Rosaceae
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red Bluff dwarf rush	VASC	Juncaceae
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	VASC	Juncaceae
<i>Lagophylla diabolensis</i>	Diablo Range hare-leaf	VASC	Asteraceae
<i>Lasthenia californica</i> subsp. <i>macrantha</i>	perennial goldfields	VASC	Asteraceae
<i>Lasthenia conjugens</i>	Contra Costa goldfields	VASC	Asteraceae
<i>Lasthenia glabrata</i> subsp. <i>coulteri</i>	Coulter's goldfields	VASC	Asteraceae
<i>Layia carnosa</i>	beach layia	VASC	Asteraceae
<i>Layia discoidea</i>	rayless tidytips	VASC	Asteraceae
<i>Layia heterotricha</i>	pale-yellow layia	VASC	Asteraceae

SE	1B.2			G4T2T3	S2					K
	1B.2			G1G2	S1S2				K	
	1B.2			G4T2T3	S2S3			K		K
	1B.2			G2	S2			S		K
	1B.1			G2	S2					K
	1B.2			G2	S2				K	
	1B.2			G1	S1					S
	1B.2			G3	S3					K
	1B.2			G2	S2					K
	1B.2			G2	S2					S
SE	1B.2			G1	S1					S
	1B.2			G2	S2					K
	1B.2			G2Q	S2					K
	1B.3			G2	S2					K
	1B.3			G2	S2			S		
	1B.3			G2	S2				K	K
	1B.2			G1	S1					K
	1B.1			G4T1	S1					S
	1B.1			G1G2	S1					S
	1B.2			G2	S2					S
	1B.2			G2	S2				K	
	1B.2			G2	S2			S		K
	1B.3			G3	S3					K
	1B.1			G5T1	S1					K
	1B.3			G2	S2				K	S
	1B.2			G4T1	S2				K	
	1B.3			G2	S2				K	
	1B.2			G3G5T2T3	S2				K	K
	1B.2	T		G2T2	S2 (CA); S1 (NV)				K	
	1B.3			G2G3	S1					K
	2B.2			G4T3Q	S2				K	
	1B.3			G1	S1					S
	1B.2			G2	S2				K	
	1B.3			G1	S2				K	K
	1B.2			G2	S2.2					S
		W		G2T2	S2 (NV)				K	
	1B.2			G2	S2				S	
FT	1B.1	T	CE	G1	S2 (CA); S1 (NV)				K	
	1B.1			G2T2	S2					K
	1B.2			G3	S3				S	K
	1B.2			G2G3	S2S3				K	
	1B.2			G3T2	S2			S		K
FE	1B.1			G1	S1				K	
	1B.1			G4T2	S2				K	
FE SE	1B.1			G2	S2				K	
	1B.1			G1	S1				K	
	1B.1			G2	S2				K	K

<i>Layia jonesii</i>	Jones' layia	VASC	Asteraceae
<i>Layia leucopappa</i>	Comanche Point layia	VASC	Asteraceae
<i>Layia munzii</i>	Munz's tidy-tips	VASC	Asteraceae
<i>Layia septentrionalis</i>	Colusa layia	VASC	Asteraceae
<i>Legenere limosa</i>	legenere	VASC	Campanulaceae
<i>Lepechinia ganderi</i>	Gander's pitcher-sage	VASC	Lamiaceae
<i>Lepidium flavum</i> var. <i>felipense</i>	Borrego Valley pepper-grass	VASC	Brassicaceae
<i>Lepidium jaredii</i> subsp. <i>album</i>	Panoche pepper-grass	VASC	Brassicaceae
<i>Lepidium jaredii</i> subsp. <i>jaredii</i>	Jared's pepper-grass	VASC	Brassicaceae
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	Santa Rosa Mountains leptosiphon	VASC	Polemoniaceae
<i>Leptosiphon nuttallii</i> subsp. <i>howellii</i>	Mt. Tedoc linanthus	VASC	Polemoniaceae
<i>Leptosiphon serrulatus</i>	Madera leptosiphon	VASC	Polemoniaceae
<i>Leptosyne hamiltonii</i>	Mt. Hamilton coreopsis	VASC	Asteraceae
<i>Lessingia glandulifera</i> var. <i>tomentosa</i>	Warner Springs lessingia	VASC	Asteraceae
<i>Lewisia cantelovii</i>	Cantelow's lewisia	VASC	Portulacaceae
<i>Lewisia cotyledon</i> var. <i>heckneri</i>	Heckner's lewisia	VASC	Portulacaceae
<i>Lewisia disepala</i>	Yosemite lewisia	VASC	Montiaceae
<i>Lilium maritimum</i>	coast lily	VASC	Liliaceae
<i>Limnanthes alba</i> subsp. <i>parishii</i>	Parish's meadowfoam	VASC	Limnanthaceae
<i>Limnanthes bakeri</i>	Baker's meadowfoam	VASC	Limnanthaceae
<i>Limnanthes floccosa</i> subsp. <i>bellingermana</i>	Bellinger's meadowfoam	VASC	Limnanthaceae
<i>Limnanthes floccosa</i> subsp. <i>californica</i>	Butte County meadowfoam	VASC	Limnanthaceae
<i>Linanthus bernardinus</i>	Pioneertown linanthus	VASC	Polemoniaceae
<i>Linanthus maculatus</i> subsp. <i>emaculatus</i>	Jacumba Mountains linanthus	VASC	Polemoniaceae
<i>Linanthus maculatus</i> subsp. <i>maculatus</i>	Little San Bernardino Mtns. linanthus	VASC	Polemoniaceae
<i>Linanthus orcuttii</i>	Orcutt's linanthus	VASC	Polemoniaceae
<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	Sagebrush loeflingia	VASC	Caryophyllaceae
<i>Lomatium congdonii</i>	Congdon's lomatium	VASC	Apiaceae
<i>Lomatium observatorium</i>	Mt. Hamilton lomatium	VASC	Apiaceae
<i>Lomatium ravenii</i> var. <i>ravenii</i>	Raven's lomatium	VASC	Apiaceae
<i>Lomatium repostum</i>	Napa lomatium	VASC	Apiaceae
<i>Lomatium roseanum</i>	adobe lomatium	VASC	Apiaceae
<i>Lomatium shevockii</i>	Owens Peak lomatium	VASC	Apiaceae
<i>Lupinus citrinus</i> var. <i>citrinus</i>	orange lupine	VASC	Fabaceae
<i>Lupinus citrinus</i> var. <i>deflexus</i>	Mariposa lupine	VASC	Fabaceae
<i>Lupinus duranii</i>	Mono Lake lupine	VASC	Fabaceae
<i>Lupinus excubitus</i> var. <i>medius</i>	Mountain Springs bush lupine	VASC	Fabaceae
<i>Lupinus ludovicianus</i>	San Luis Obispo County lupine	VASC	Fabaceae
<i>Lupinus magnificus</i> var. <i>hesperius</i>	McGee Meadows lupine	VASC	Fabaceae
<i>Lupinus magnificus</i> var. <i>magnificus</i>	Panamint Mtns. lupine	VASC	Fabaceae
<i>Lupinus sericatus</i>	Cobb Mountain lupine	VASC	Fabaceae
<i>Lupinus spectabilis</i>	shaggyhair lupine	VASC	Fabaceae
<i>Lupinus uncialis</i>	lilliput lupine	VASC	Fabaceae
<i>Madia radiata</i>	showy golden madia	VASC	Asteraceae
<i>Malacothamnus aboriginum</i>	Indian Valley bush-mallow	VASC	Malvaceae
<i>Malacothamnus hallii</i>	Hall's bush-mallow	VASC	Malvaceae
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush-mallow	VASC	Malvaceae

	1B.2	G2	S2		S				
	1B.1	G1	S1		S				
	1B.2	G2	S2		K	K			
	1B.2	G2	S2					S	K
	1B.1	G2	S2			S		K	
	1B.3	G3?	S3					K	
	1B.2	G5T1	S1				S		
	1B.2	G2T2	S2			K			
	1B.2	G2T1T2	S1S2		K				
	1B.3	G4T1T2	S1S2					K	
	1B.3	G5T2	S2					S	
	1B.2	G3	S3		S				
	1B.2	G2	S2			S			
	1B.1	G4T?	S2					K	
	1B.2	G3	S3				K	S	
	1B.2	G4T3	S3?					K	
	1B.2	G2	S2		K				
	1B.1	G2	S2						K
SE	1B.2	G4T2	S2				K	S	
SR	1B.1	G1	S1		S				
	1B.2	G4T3	S1		S			S	
FE SE	1B.1	G4T1	S1					S	
	1B.2	G1	S1			S			
	1B.1	G2T1	S1				K		
	1B.2	G2	S2			K		K	
	1B.3	G3	S2				S	S	
	2B.2	G5T2T3	S2		S		K	K	
	1B.2	G2	S2					K	
	1B.2	G1	S1				S		
	1B.3	G4T2	S2		K		K		
	1B.2	G2G3	S2S3						K
	1B.2	W	G2G3	S2 (CA); S2 (NV)	K				
	1B.2	G2	S2			K			K
	1B.2	G2T2	S2		S				
ST	1B.2	G2T1	S1					S	
	1B.2	G2	S2				K		
	1B.3	G4T2T3	S2					K	K
	1B.2	G1	S1		S				
	1B.3	G3T2Q	S2				S		
	1B.2	G3T2Q	S2				S		K
	1B.2	G2	S2						K
	1B.2	G2	S2					K	
	2B.2	G4	S2		K				
	1B.1	G3	S3			K	K		
	1B.2	G3	S3		S		K		
	1B.2	G2Q	S2						K
	1B.2	G3T3Q	S3				K		

<i>Malacothamnus palmeri</i> var. <i>lucianus</i>	Arroyo Seco bush-mallow	VASC	Malvaceae
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	VASC	Asteraceae
<i>Menodora spinescens</i> var. <i>mohavensis</i>	Mojave menodora	VASC	Oleaceae
<i>Mentzelia inyoensis</i>	Inyo blazing star	VASC	Loasaceae
<i>Mentzelia polita</i>	polished blazing star	VASC	Loasaceae
<i>Mentzelia tridentata</i>	creamy blazing star	VASC	Loasaceae
<i>Microseris paludosa</i>	marsh microseris	VASC	Asteraceae
<i>Mielichhoferia shevockii</i>	Shevock's copper moss	BRYO	Mielichhoferiaceae
<i>Mimulus gracilipes</i>	slender-stalked monkerflower	VASC	Phrymaceae
<i>Monardella beneolens</i>	sweet-smelling monardella	VASC	Lamiaceae
<i>Monardella boydii</i>	Boyd's monardella	VASC	Lamiaceae
<i>Monardella eremicola</i>	Clark Mountain monardella	VASC	Lamiaceae
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	intermediate monardella	VASC	Lamiaceae
<i>Monardella hypoleuca</i> subsp. <i>lanata</i>	felt-leaved monardella	VASC	Lamiaceae
<i>Monardella linoides</i> subsp. <i>oblonga</i>	Tehachapi monardella	VASC	Lamiaceae
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	VASC	Lamiaceae
<i>Monardella nana</i> subsp. <i>leptosiphon</i>	San Felipe monardella	VASC	Lamiaceae
<i>Monardella palmeri</i>	Palmer's monardella	VASC	Lamiaceae
<i>Monardella robisonii</i>	Robison monardella	VASC	Lamiaceae
<i>Monardella sinuata</i> subsp. <i>nigrescens</i>	northern curly-leaved monardella	VASC	Lamiaceae
<i>Monardella stoneana</i>	Jennifer's monardella	VASC	Lamiaceae
<i>Monardella undulata</i> subsp. <i>crispa</i>	crisp monardella	VASC	Lamiaceae
<i>Monardella undulata</i> subsp. <i>undulata</i>	San Luis Obispo monardella	VASC	Lamiaceae
<i>Monardella venosa</i>	veiny monardella	VASC	Lamiaceae
<i>Monolopia congdonii</i>	San Joaquin woolly threads	VASC	Asteraceae
<i>Nama demissa</i> var. <i>covillei</i>	Coville's purple mat	VASC	Namaceae
<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	few-flowered navarretia	VASC	Polemoniaceae
<i>Navarretia leucocephala</i> subsp. <i>bakeri</i>	Baker's navarretia	VASC	Polemoniaceae
<i>Navarretia miwukensis</i>	Mi-Wuk navarretia	VASC	Polemoniaceae
<i>Navarretia nigelliformis</i> subsp. <i>radians</i>	shining navarretia	VASC	Polemoniaceae
<i>Navarretia paradoxiclara</i>	Patterson's navarretia	VASC	Polemoniaceae
<i>Navarretia paradoxinota</i>	Porter's navarretia	VASC	Polemoniaceae
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	VASC	Polemoniaceae
<i>Navarretia rosulata</i>	Marin County navarretia	VASC	Polemoniaceae
<i>Navarretia setiloba</i>	Piute Mountains navarretia	VASC	Polemoniaceae
<i>Nemacladus calcaratus</i>	Chimney Creek nemacladus	VASC	Campanulaceae
<i>Nemacladus inyoensis</i>	Badger Flat threadplant	VASC	Campanulaceae
<i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>	Robbins' nemacladus	VASC	Campanulaceae
<i>Nemacladus twisselmannii</i>	Twisselmann's nemacladus	VASC	Campanulaceae
<i>Neviusia cliftonii</i>	Shasta snow-wreath	VASC	Rosaceae
<i>Nitrophila mohavensis</i>	Amargosa niterwort	VASC	Amaranthaceae
<i>Nolina interrata</i>	Dehesa nolina, bear grass	VASC	Ruscaceae
<i>Oenothera wolfii</i>	Wolf's evening-primrose	VASC	Onagraceae
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	VASC	Cactaceae
<i>Opuntia basilaris</i> var. <i>treleasei</i>	Bakersfield cactus	VASC	Cactaceae
<i>Orcuttia californica</i>	California orcutt grass	VASC	Poaceae
<i>Orcuttia inaequalis</i>	San Joaquin Valley orcutt grass	VASC	Poaceae

	1B.2		G3T1Q	S1			S	
	1B.2		G5T2	S2			S	
	1B.2		G4T2	S2		K		K
	1B.1	W	G3	S3		K	K	
	1B.2		G2	S2				K
	1B.3		G3	S3		K		S
	1B.2		G2	S2				K
	1B.2		G2	S2			K	S
	1B.2		G2G3	S2S3		S		
	1B.3		G1	S1				K
	1B.2		G2Q	S2		K		
	1B.3		G2G3Q	S2S3				K
	1B.3		G4T2?	S2?				S
	1B.2		G4T3	S3				K
	1B.3		G5T2	S2				K
	1B.3		G5T3	S3				S
	1B.2		G4G5T2Q	S2			S	
	1B.2		G2	S2		S		
	1B.3		G3	S3		K		S
	1B.2		G3T2	S2			S	
	1B.2		G2	S1				K
	1B.2		G3T2	S2		K		
	1B.2		G2	S2		K		
	1B.1		G1	S1				S
FE	1B.2		G2	S3		K	K	
	1B.3		G5T3	S3		K		K
FE ST	1B.1		G4T1	S1				S
	1B.1		G4T2	S2				S
	1B.2		G1G2	S1S2				K
	1B.2		G4T2	S2			K	
	1B.3		G2	S2				K
	1B.3		G2	S2				K
	1B.2		G2	S2			S	
	1B.2		G2	S2				K
	1B.1		G2	S2		K		S
	1B.2		G1	S1		K		S
	1B.2		G3	S3				K
	1B.2		G3T2	S2				S
SR	1B.2		G1	S1		S		
	1B.2		G2	S2				S
FE SE	1B.1	CE	G1	S1		K		
	SE	1B.1	G2	S2				S
	1B.1		G2	S1		S		
	1B.2		G5T3	S3		K		S
FE SE	1B.1		G5T1	S1		S		S
FE SE	1B.1		G1	S1				S
FT SE	1B.1		G1	S1		K		

<i>Orcuttia pilosa</i>	hairy orcutt grass	VASC	Poaceae
<i>Orcuttia tenuis</i>	slender orcutt grass	VASC	Poaceae
<i>Oreocarya roosiorum</i>	bristlecone cryptantha	VASC	Boraginaceae
<i>Oreonana vestita</i>	woolly mountain-parsley	VASC	Apiaceae
<i>Oreostemma elatum</i>	tall alpine aster	VASC	Asteraceae
<i>Orthocarpus pachystachyus</i>	Shasta orthocarpus	VASC	Orobanchaceae
<i>Packera eurycephala</i> var. <i>lewisrosei</i>	cut-leaved ragwort	VASC	Asteraceae
<i>Packera ganderi</i>	Gander's butterweed	VASC	Asteraceae
<i>Packera layneae</i>	Layne's butterweed	VASC	Asteraceae
<i>Palafoxia arida</i> var. <i>gigantea</i>	giant Spanish needle	VASC	Asteraceae
<i>Panicum acuminatum</i> var. <i>thermale</i>	Geyser's panicum	VASC	Poaceae
<i>Paronychia ahartii</i>	Ahart's paronychia	VASC	Caryophyllaceae
<i>Pedicularis centranthera</i>	dwarf lousewort	VASC	Orobanchaceae
<i>Pedimelum castoreum</i>	Beaver Dam breadroot	VASC	Fabaceae
<i>Penstemon albomarginatus</i>	white-margined beardtongue	VASC	Plantaginaceae
<i>Penstemon bicolor</i> subsp. <i>roseus</i>	rosy two-toned beardtongue	VASC	Plantaginaceae
<i>Penstemon fruticiformis</i> var. <i>amargosae</i>	Death Valley beardtongue	VASC	Plantaginaceae
<i>Penstemon janishiae</i>	Janish's beardtongue	VASC	Plantaginaceae
<i>Penstemon newberryi</i> var. <i>sonomensis</i>	Sonoma beardtongue	VASC	Plantaginaceae
<i>Penstemon personatus</i>	closed-throated beardtongue	VASC	Plantaginaceae
<i>Penstemon stephensii</i>	Stephens' beardtongue	VASC	Plantaginaceae
<i>Penstemon sudans</i>	Susanville beardtongue	VASC	Plantaginaceae
<i>Pentachaeta exilis</i> subsp. <i>aeolica</i>	slender pentachaeta	VASC	Asteraceae
<i>Perityle inyoensis</i>	Inyo rock daisy	VASC	Asteraceae
<i>Perityle villosa</i>	Hanaupah rock daisy	VASC	Asteraceae
<i>Petalonyx thurberi</i> subsp. <i>gilmanii</i>	Death Valley sandpaper-plant	VASC	Loasaceae
<i>Phacelia cookei</i>	Cooke's phacelia	VASC	Boraginaceae
<i>Phacelia greenei</i>	Scott Valley phacelia	VASC	Boraginaceae
<i>Phacelia insularis</i> var. <i>continentis</i>	North Coast phacelia	VASC	Hydrophyllaceae
<i>Phacelia inundata</i>	playa phacelia	VASC	Boraginaceae
<i>Phacelia inyoensis</i>	Inyo phacelia	VASC	Boraginaceae
<i>Phacelia leonis</i>	Siskiyou phacelia	VASC	Boraginaceae
<i>Phacelia monoensis</i>	Mono County phacelia	VASC	Boraginaceae
<i>Phacelia mustelina</i>	Death Valley round-leaved phacelia	VASC	Boraginaceae
<i>Phacelia nashiana</i>	Charlotte's phacelia	VASC	Boraginaceae
<i>Phacelia novemmillensis</i>	Nine Mile Canyon phacelia	VASC	Boraginaceae
<i>Phacelia parishii</i>	Parish's phacelia	VASC	Boraginaceae
<i>Phacelia perityloides</i> var. <i>jaegeri</i>	Jaeger's phacelia	VASC	Hydrophyllaceae
<i>Phacelia phacelioides</i>	Mount Diablo phacelia	VASC	Boraginaceae
<i>Phaeocollybia californica</i>	California phaeocollybia	FUNG	Cortinariaceae
<i>Phaeocollybia olivacea</i>	olive phaeocollybia	FUNG	Cortinariaceae
<i>Phaeocollybia spadicea</i>	spadicea phaeocollybia	FUNG	Cortinariaceae
<i>Phlox hirsuta</i>	Yreka phlox	VASC	Polemoniaceae
<i>Pholisma sonorae</i>	sand food	VASC	Boraginaceae
<i>Pinus albicaulis</i>	white bark pine	VASC	Pinaceae
<i>Piperia candida</i>	white-flowered rein orchid	VASC	Orchidaceae
<i>Piperia yadonii</i>	Yadon's rein orchid	VASC	Orchidaceae

FE	SE	1B.1		G1	S1				S
FT	SE	1B.1		G2	S2		K		K
		SR		1B.2	G2	S2		S	S
				1B.3	G3	S3		K	
				1B.2	G2	S2			S
				1B.1	G1	S1			S
				1B.2	G4T2	S2			K
		SR		1B.2	G2	S2			K
FT	SR	1B.2		G2	S2			K	S
				1B.3	G5T3	S2		K	
		SE		1B.2	G5T2Q	S2			S
				1B.1	G2	S2			K
				2B.3	G4	S2		K	
				1B.2	G3	S2		K	K
				1B.1	G2	S1		K	K
				1B.1	G3T3Q	S1			K
				1B.3	G4T3	S2		K	K
				2B.2	G4	S1		K	
				1B.3	G4T2	S2			K
				1B.2	G2	S2			S
				1B.3	G2	S2		K	K
		4.3	W	N1	G3	S3		S	K
				1B.2	G5T1	S1			K
				1B.2	G2	S2		K	K
				1B.3	G2	S2			S
				1B.3	G5T2	S2		K	K
				1B.1	G1	S1			S
				1B.2	G2	S2			K
				1B.2	G2T2	S2			S
				1B.3	W	G2	S2 (CA); S2? (NV)	S	K
				1B.2		G2	S2		K
				1B.3		G3	S3		S
				1B.1	T	G3	S2		K
				1B.3		G2	S2		S
				1B.2		G3	S3		K
				1B.2		G3	S3		K
				1B.1		G2G3	S1		K
				1B.1		G4T2	S2		K
				1B.2		G1	S1		K
						G3	None		S
						G3	None		S
						G3G4	None		S
FE	SE	1B.2		G1	S1				S
				1B.2	G2	S2			K
FP				G3	SNR			K	
				1B.3	G3	S3		S	
FE		1B.1		G1	S1			K	

<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	VASC	Boraginaceae
<i>Plagiobothrys parishii</i>	Parish's popcornflower	VASC	Boraginaceae
<i>Plagiobothrys uncinatus</i>	hooked popcorn-flower	VASC	Boraginaceae
<i>Pleuropogon hooverianus</i>	Hoover's semaphore grass	VASC	Poaceae
<i>Poa diaboli</i>	Diablo Canyon blue grass	VASC	Poaceae
<i>Poa sierrae</i>	Sierra blue grass	VASC	Poaceae
<i>Polyctenium williamsiae</i>	Williams's combleaf	VASC	Brassicaceae
<i>Polygonum polygaloides</i> subsp. <i>esotericum</i>	Modoc County knotweed	VASC	Polygonaceae
<i>Potentilla basaltica</i>	Black Rock potentilla	VASC	Rosaceae
<i>Pseudobahia peirsonii</i>	Tulare pseudobahia	VASC	Asteraceae
<i>Ptilidium californicum</i>	Pacific fuzzwort	BRYO	Ptilidiaceae
<i>Puccinellia howellii</i>	Howell's alkali-grass	VASC	Poaceae
<i>Puccinellia parishii</i>	Parish's alkali-grass	VASC	Poaceae
<i>Puccinellia simplex</i>	California alkali grass	VASC	Poaceae
<i>Pyrrocoma lucida</i>	sticky pyrrocoma	VASC	Asteraceae
<i>Quercus dumosa</i>	Nuttall's scrub oak	VASC	Fagaceae
<i>Raillardella pringlei</i>	showy raillardella	VASC	Asteraceae
<i>Rhynchospora californica</i>	California beaked-rush	VASC	Cyperaceae
<i>Ribes canthariforme</i>	Moreno currant, San Diego currant	VASC	Grossulariaceae
<i>Ribes tularense</i>	Sequoia gooseberry	VASC	Grossulariaceae
<i>Rorippa columbiae</i>	Columbia yellow cress	VASC	Brassicaceae
<i>Rupertia hallii</i>	Hall's rupertia	VASC	Fabaceae
<i>Sabulina howellii</i>	Howell's sandwort	VASC	Caryophyllaceae
<i>Sabulina stolonifera</i>	Scott Mtn. sandwort	VASC	Caryophyllaceae
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	VASC	Alismataceae
<i>Saltugilia latimeri</i>	Latimer's woodland-gilia	VASC	Polemoniaceae
<i>Salvia greatae</i>	Orocopia sage	VASC	Lamiaceae
<i>Sanicula saxatilis</i>	rock sanicle	VASC	Apiaceae
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	VASC	Lamiaceae
<i>Sedum albomarginatum</i>	Feather River stonecrop	VASC	Crassulaceae
<i>Sedum laxum</i> subsp. <i>eastwoodiae</i>	Red Mountain stonecrop	VASC	Crassulaceae
<i>Sedum paradisum</i> subsp. <i>paradisum</i>	Canyon Creek stonecrop	VASC	Crassulaceae
<i>Senecio clevelandii</i> var. <i>heterophyllus</i>	Red Hills ragwort	VASC	Asteraceae
<i>Sidalcea covillei</i>	Owens Valley checkerbloom	VASC	Malvaceae
<i>Sidalcea hickmanii</i> subsp. <i>anomala</i>	Cuesta Pass checkerbloom	VASC	Malvaceae
<i>Sidalcea hickmanii</i> subsp. <i>parishii</i>	Parish's checkerbloom	VASC	Malvaceae
<i>Sidalcea keckii</i>	Keck's checkerbloom	VASC	Malvaceae
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	purple-stemmed checkerbloom	VASC	Malvaceae
<i>Sidalcea malviflora</i> subsp. <i>patula</i>	Siskiyou checkerbloom	VASC	Malvaceae
<i>Sidalcea oregana</i> subsp. <i>eximia</i>	coast checkerbloom	VASC	Malvaceae
<i>Sidalcea robusta</i>	Butte County checkerbloom	VASC	Malvaceae
<i>Silene bolanderi</i>	Bolander's catchfly	VASC	Caryophyllaceae
<i>Silene campanulata</i> subsp. <i>campanulata</i>	Red Mountain catchfly	VASC	Caryophyllaceae
<i>Silene occidentalis</i> subsp. <i>longistipitata</i>	long-stiped campion	VASC	Caryophyllaceae
<i>Smilax jamesii</i>	English Peak greenbriar	VASC	Smilacaceae
<i>Sowerbyella rhenana</i>	stalked orange peel fungus	FUNG	Pyrenemataceae
<i>Spathularia flavida</i>	fairy fan	FUNG	Cudoniaceae

	1B.2		G3T1Q	S1						K
	1B.1		G1	S1					S	
	1B.2		G2	S2			S			
ST	1B.1		G2	S2		S				
	1B.2		G2	S2			S			
	1B.3		G3	S3						K
	1B.2	T	CE	G2Q	S1 (CA); S2 (NV)	S			K	S
	1B.1			G4G5T3	S3			K		
FC	1B.3	T		G1	S1(CA); S1 (NV)			K		
FT SE	1B.1			G1	S1			S		
	4.3			G3G4	S3?					S
	1B.1			G1	S1					S
	1B.1			G2G3	S1			S		
	1B.2			G3	S2			K		K
	1B.2			G3	S3					K
	1B.1			G3	S3					K
	1B.2			G3	S3					S
	1B.1			G1	S1					S
	1B.3			G2	S2					S
	1B.3			G2	S2			K		
	1B.2			G3	S1	S			S	S
	1B.2			G2G3	S2S3					K
	1B.3			G4	S2					S
	1B.3			G2	S2					S
	1B.2			G3	S3					K
	1B.2			G3	S3			K		K K K
	1B.3			G2G3	S2S3				K	S K
SR	1B.2			G2	S2				S	
	1B.2			G4T3	S3					S
	1B.2			G2	S2					S
	1B.2			G5T2	S2			K		
	1B.3			G4G5T2	S2					K
	1B.2			G4?T2Q	S2?					K
SE	1B.1			G2	S2				K	
SR	1B.2			G3T1	S1			S		
SR	1B.2			G3T1	S1					S
FE	1B.1			G2	S2				K	K
	1B.2			G5T1	S1					K
	1B.2			G5T2	S2			S		
	1B.2			G5T1	S1			S		
	1B.2			G2	S2					K
	1B.2			G4T4?	S2			K		K
SE	4.2			G5T3Q	S3			K		S
	1B.2			G4T2Q	S2					S
	1B.3			G2	S2					S
				G3G5	None					S
				G4G5	None					S

<i>Sphaeralcea rusbyi</i> var. <i>eremicola</i>	Rusby's desert-mallow	VASC	Malvaceae
<i>Stenotus lanuginosus</i> var. <i>lanuginosus</i>	woolly stenotus	VASC	Asteraceae
<i>Stipa exigua</i>	little ricegrass	VASC	Poaceae
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	VASC	Brassicaceae
<i>Streptanthus brachiatus</i> subsp. <i>brachiatus</i>	Socrates Mine jewel-flower	VASC	Brassicaceae
<i>Streptanthus brachiatus</i> subsp. <i>hoffmanii</i>	Freed's jewel-flower	VASC	Brassicaceae
<i>Streptanthus callistus</i>	Mount Hamilton jewel-flower	VASC	Brassicaceae
<i>Streptanthus campestris</i>	southern jewel-flower	VASC	Brassicaceae
<i>Streptanthus cordatus</i> var. <i>piutensis</i>	Piute Mountains jewel-flower	VASC	Brassicaceae
<i>Streptanthus glandulosus</i> var. <i>hoffmanii</i>	Hoffmann's jewel-flower	VASC	Brassicaceae
<i>Streptanthus hesperidis</i>	green jewelflower	VASC	Brassicaceae
<i>Streptanthus insignis</i> ssp. <i>lyonii</i>	Arburua Ranch jewelflower	VASC	Brassicaceae
<i>Streptanthus morrisonii</i> subsp. <i>elatus</i>	Three Peaks jewel-flower	VASC	Brassicaceae
<i>Streptanthus morrisonii</i> subsp. <i>hirtiflorus</i>	Dorr's Cabin jewel-flower	VASC	Brassicaceae
<i>Streptanthus morrisonii</i> subsp. <i>kruckebergii</i>	Kruckeberg's jewel-flower	VASC	Brassicaceae
<i>Streptanthus morrisonii</i> subsp. <i>morrisonii</i>	Morrison's jewel-flower	VASC	Brassicaceae
<i>Streptanthus oliganthus</i>	Masonic Mountain jewel-flower	VASC	Brassicaceae
<i>Streptanthus vernalis</i>	early jewel-flower	VASC	Brassicaceae
<i>Stylocline citroleum</i>	oil neststraw	VASC	Asteraceae
<i>Stylocline masonii</i>	Mason neststraw	VASC	Asteraceae
<i>Sulcaria isidiifera</i>	splitting yarn lichen	LICH	Alectoriaceae
<i>Symphotrichum defoliatum</i>	San Bernardino aster	VASC	Asteraceae
<i>Symphotrichum greatae</i>	Greata's aster	VASC	Asteraceae
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	VASC	Euphorbiaceae
<i>Thelypodium howellii</i> ssp. <i>howellii</i>	Howell's thelypodium	VASC	Brassicaceae
<i>Thermopsis californica</i> var. <i>semota</i>	velvety false lupine	VASC	Fabaceae
<i>Thysanocarpus rigidus</i>	Ridge Fringepod	VASC	Brassicaceae
<i>Tortula californica</i>	California screw-moss	BRYO	Pottiaceae
<i>Tracyina rostrata</i>	beaked tracyina	VASC	Asteraceae
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	VASC	Fabaceae
<i>Trifolium jokerstii</i>	Butte County golden clover	VASC	Fabaceae
<i>Trifolium kingii</i> subsp. <i>dedeckeriae</i>	DeDecker's clover	VASC	Fabaceae
<i>Trifolium polyodon</i>	Pacific Grove clover	VASC	Fabaceae
<i>Trifolium siskiyouense</i>	Siskiyou clover	VASC	Fabaceae
<i>Triteleia ixioides</i> ssp. <i>cookii</i>	Cook's triteleia	VASC	Themidaceae
<i>Triteleia piutensis</i>	Piute Mountains triteleia	VASC	Themidaceae
<i>Tropidocarpum californicum</i>	Kings gold	VASC	Brassicaceae
<i>Vaccinium shastense</i> subsp. <i>shastense</i>	Shasta huckleberry	VASC	Ericaceae
<i>Verbena californica</i>	Red Hills vervain	VASC	Verbenaceae
<i>Viola pinetorum</i> ssp. <i>grisea</i>	grey-leaved violet	VASC	Violaceae
<i>Wyethia reticulata</i>	El Dorado mule ears	VASC	Asteraceae
<i>Xylorhiza cognata</i>	Mecca-aster	VASC	Asteraceae
<i>Xylorhiza orcuttii</i>	Orcutt's woody aster	VASC	Asteraceae
<i>Yucca brevifolia</i>	Western joshua tree	VASC	Agavaceae
<i>Zeltnera namophila</i>	spring-loving centaury	VASC	Gentianaceae

Plant Type: BRYO = Bryophyte; FUNG = Fungus; LICH = Lichen; VASC = Vascular plant; Fed Status: FE = Federally Listed; FD = Federally Delisted. State of California (CA) Status: SE = State Endangered; ST = State Threatened; SR = State Rare, threatened, or endangered in CA and elsewhere; 2 = Plants rare, threatened, or endangered in CA, but more common on watch list. Decimals following the CA Rare Plant Rank Numbers: x.1 = Seriously endangered in CA; x.2 = Fairly endangered in CA. State of Nevada (NV) Status: CE = Critically Endangered; CE# = Proposed for Critically Endangered. Global and State Rank: The G-ranks are used for species as a whole, T-ranks for subspecies; the State (S) Rank is assigned by the State Heritage Program. <http://www.natureserve.org/explorer/ranking.htm#interpret>. K or S under BLM field offices: K = Known to occur on BLM land.

Type: BRYO = Bryophyte; FUNG = Fungus; LICH = Lichen; VASC = Vascular plant; Fed Status: FE = Federally Endangered; FD = Federally Delisted. State of California (CA) Status: SE = State Endangered; ST = State Threatened; SR = State Rare, threatened, or endangered in CA and elsewhere; 2 = Plants rare, threatened, or endangered in CA, but more common on watch list. Decimals following the CA Rare Plant Rank Numbers: x.1 = Seriously endangered in CA; x.2 = Fairly endangered in CA. State of Nevada (NV) Status: CE = Critically Endangered; CE# = Proposed for Critically Endangered. Global and State Rank: The G-ranks are used for species as a whole, T-ranks for subspecies; the State (S) Rank is assigned by the State Heritage Program. www.natureserve.org/explorer/ranking.htm#interpret. K or S under BLM field offices: K = Known to occur on BLM land.

y Endangered; FD = Federally Delisted; FT = Federally Threatened; FC = Federal Candidate; FP = Proposed for
ed; SR = State Rare; SC = State Candidate. California Rare Plant Rank: 1A = Plants presumed extinct in CA; 1B =
ore common elsewhere; 3 = Plants about which more Information is needed; 4 = Plants of limited distribution – a
dangered in CA; x.3 = Not very endangered in CA. Nevada Native Plant Society (NNPS) Status: W = Watch List.
ate Rank: The Global Rank is assigned by NatureServe and reflects the overall condition of the element throughout its
ate Heritage Program and reflects the overall condition of the element within a State. Code meanings can be found at:
n BLM lands managed by that field office; S = Suspected to occur on BLM lands managed by that field office. Plant
angered; FD = Federally Delisted; FT = Federally Threatened; FC = Federal Candidate; FP = Proposed for Federal
State Rare; SC = State Candidate. California Rare Plant Rank: 1A = Plants presumed extinct in CA; 1B = Plants rare,
n elsewhere; 3 = Plants about which more Information is needed; 4 = Plants of limited distribution – a watch list.
CA; x.3 = Not very endangered in CA. Nevada Native Plant Society (NNPS) Status: W = Watch List. State of Nevada
lobal Rank is assigned by NatureServe and reflects the overall condition of the element throughout its global range;
rogram and reflects the overall condition of the element within a State. Code meanings can be found at: <http://>
l lands managed by that field office; S = Suspected to occur on BLM lands managed by that field office.

FIELD OFFICE	COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS
	Owens pupfish	Cyprinodon radiosus	FE	SE
	Owens speckled dace	Rhinichthys osculus ssp. 2		
	Owens tui chub	Siphateles bicolor snyderi	FE	SE
Eagle Lake	20 Species			
	Mammal			
	Fringed myotis	Myotis thysanodes		
	Long-eared myotis	Myotis evotis		
	Pacific fisher	Martes pennanti (pacifica) DPS	FC	SC
	Pallid bat	Antrozous pallidus		
	Pygmy rabbit	Brachylagus idahoensis		
	Small-footed myotis	Myotis ciliolabrum		
	Townsend's big-eared bat	Corynorhinus townsendii		
	Yuma myotis	Myotis yumanensis		
	Bird			
	Bald eagle	Haliaeetus leucocephalus	FD	SE
	Bank swallow	Riparia riparia		ST
	Burrowing owl	Athene cunicularia		
	California spotted owl	Strix occidentalis occidentalis		
	Golden eagle	Aquila chrysaetos		
	Greater sage-grouse	Centrocercus urophasianus	FC	
	Greater sandhill crane	Grus canadensis tabida		ST
	Northern goshawk	Accipiter gentilis		
	Swainson's hawk	Buteo swainsoni		ST
	Tricolored blackbird	Agelaius tricolor		
	Reptile			
	California mountain kingsnake	Lampropeltis zonata		
	Northern sagebrush lizard	Sceloporus graciosus graciosus		

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, SC = State Candidate, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern

BLM STATUS	OTHER STATUS
	SF
BLMS	



BLMS	
BLMS	
BLMS	SSC
BLMS	SSC
BLMS	
BLMS	
BLMS	SSC
BLMS	
BLMS	EA
BLMS	
BLMS	SSC
BLMS	SSC
BLMS	EA
BLMS	SSC
BLMS	SF
BLMS	SSC
BLMS	
BLMS	SSC
BLMS	
BLMS	

erred, ST = State Threatened,

Attachment C

Potential for Special- Status Species to Occur in the Study Area

Scientific Name

Common Name

Plants

Abronia alpina
Ramshaw meadows abronia

Abronia nana var. *covillei*
Coville's dwarf abronia

Agrostis humilis
mountain bent grass

Aliciella triodon
coyote gilia

Allium atrorubens var. *atrium*
Great Basin onion

Arabis repanda var. *greenii*
Greene's rockcress

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation Plan Area | October 2023

Species Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur ³
...nia	--/--/1B.1/USFS	A perennial herb found in granitic, gravelly and sandy margins of meadows and seeps from 2,400 – 2,700 meters elevation. Known from only Ramshaw Meadows and Templeton Meadows. Blooms July – August (CNPS 2023).	Will not occur. The Study Area is outside of this species known range.
...i	--/--/4.2/USFS	A perennial herb found on carbonate or sandy soils in Great Basin scrub, Joshua tree woodland, subalpine and upper montane coniferous forest, and pinyon-juniper woodland from 1,524 – 3,100 meters elevation. Blooms May – August (CNPS 2023).	May occur. Suitable habitat is present for this species in the Study Area and this species is known to occur in Inyo County (CNPS 2023).
	--/--/2B.3	A perennial herb found in alpine boulder and rock fields, meadows, seeps, and subalpine coniferous forest from 2,670 – 3,200 meters elevation. May be synonymous with <i>A. thurberiana</i> , a common species. Blooms July – September (CNPS 2023).	Will not occur. The Study Area is outside of this species known range.
	--/--/2B.2	An annual herb found in Great Basin scrub and pinyon-juniper woodland from 610 – 1,700 meters elevation. Blooms April – June (CNPS 2023).	May occur. Suitable habitat is present for this species in the Study Area and this species is known to occur in Inyo County (CNPS 2023).
...orubens	--/--/2B.3	A perennial bulbiferous herb found on rocky or sandy soils in Great Basin scrub and pinyon-juniper woodland from 1,200 – 2,315 meters elevation. Blooms May – June (CNPS 2023).	May occur. Suitable habitat is present for this species in the Study Area and this species is known to occur in Inyo County (CNPS 2023).
...ei	--/--/3.3	A perennial herb found in talus and granitic rocky or sandy sites in upper montane- and subalpine coniferous forest from 2,345 – 3,600 meters elevation. Taxonomic status is uncertain; synonymous with <i>Boechea repanda</i> in Baldwin <i>et al.</i> (2012). Blooms June – August (CNPS 2023).	May occur. Suitable habitat is present for this species in the Study Area and this species is known to occur in Inyo County (CNPS 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
<i>Astragalus argophyllus</i> var. <i>argophyllus</i> silver-leaved milk-vetch	--/--/2B.2/BLM	A perennial herb found in saline or alkaline meadows, seeps, and playas from 1,240 – 2,350 meters elevation. Blooms May – July (CNPS 2023).	May occur. S for this speci this species is County (CNP
<i>Astragalus cimae</i> var. <i>sufflatus</i> Inflated Cima milk-vetch	--/--/1B.3/BLM, USFS	A perennial herb found on rocky carbonate soils in Great Basin scrub and pinyon-juniper woodland from 1,500 – 2,075 meters elevation. Currently known from only 7 extant occurrences in the Saline Valley area. Blooms April – June (CNPS 2023).	May occur. S for this speci this species is County (CNP
<i>Astragalus johannis-howellii</i> Long Valley milk-vetch	--/SR/1B.2/BLM, USFS	A perennial herb found in sandy Great Basin scrub and pinyon-juniper woodland from 2,040 – 2,530 meters elevation. Blooms June – August (CNPS 2023).	May occur. S for this speci this species is County (CNP
<i>Astragalus kentrophyta</i> var. <i>danaus</i> Sweetwater Mountains milk-vetch	--/--/4.3/USFS	A perennial herb found in rocky alpine boulder fields and subalpine coniferous forest from 3,000 – 3,660 meters elevation. Blooms June – August (CNPS 2023).	Will not occur. S below the ele species.
<i>Astragalus lemmonii</i> Lemmon's milk-vetch	--/--/1B.2/USFS	A perennial herb found in Great Basin scrub, meadows, seeps, and lake shores from 1,007 – 2,200 meters elevation. Blooms May – August (September) (CNPS 2023).	May occur. S for this speci this species is County (CNP
<i>Astragalus lentiginosus</i> var. <i>kernensis</i> Kern Plateau milk-vetch	--/--/1B.2/USFS	A perennial herb found on sandy meadows, seeps in subalpine coniferous forest from 2,240 – 2,750 meters elevation. Blooms June – July (CNPS 2023).	Will not occur. S below the ele species.
<i>Astragalus lentiginosus</i> var. <i>piscinensis</i> Fish Slough milk-vetch	FT/--/1B.1/BLM	A perennial herb found on alkaline playas from 1,130 – 1,300 meters elevation. Currently known only from Fish Slough. Blooms June – July (CNPS 2023).	May occur. S for this speci this species is County (CNP
<i>Astragalus monoensis</i> Mono milk-vetch	--/SR/1B.2/BLM, USFS	A perennial herb found on pumice, gravel, or sandy substrates in Great Basin scrub and upper montane coniferous forest from 2,110 –	May occur. S for this speci this species is County (CNP

ion Plan Area | October 2023

ential to Occur³

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

ar. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

ar. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		3,355 meters elevation. Blooms June – August (CNPS 2023).	
<i>Astragalus oophorus</i> var. <i>lavinii</i> Lavin’s milk-vetch	--/--/1B.2/BLM	A perennial herb found in Great Basin scrub and pinyon and juniper woodland from 2,450 – 3,050 meters elevation. Blooms June (CNPS 2023).	Will not occur outside of the study area.
<i>Astragalus pseudodanthus</i> Tonopah milk-vetch	--/--/1B.2/BLM	A perennial herb found on Great Basin scrub (stabilized dunes) from 2,025 – 2,075 meters elevation. Blooms May – June (CNPS 2023).	Will not occur outside of the study area.
<i>Astragalus pulsiferae</i> var. <i>pulsiferae</i> Pulsifer’s milk-vetch	--/--/1B.2/BLM	A perennial herb found on granitic soils in lower montane coniferous forest, pinyon-juniper woodland, and Great Basin scrub from 1,300 – 1,800 meters elevation. Blooms March – September (CNPS 2023).	Will not occur outside of the study area.
<i>Astragalus ravenii</i> Raven’s milk-vetch	--/--/1B.3/USFS	A perennial herb found on gravelly soil in alpine boulder and rock field, and upper montane coniferous forest from 3,355 – 3,460 meters elevation. Blooms July – September (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Astragalus webberi</i> Webber’s milk-vetch	--/--/1B.2/BLM	A perennial herb found in broad-leafed upland forest, meadows and seeps, and lower montane coniferous forest from 731 – 1,250 meters elevation. Blooms May – July (CNPS 2023).	Will not occur outside of the study area.
<i>Boechera bodiensis</i> Bodie Hills rockcress	--/--/2B.3/BLM, USFS	A perennial herb found on sandy soils in Great Basin scrub and pinyon-juniper woodland from 1,375 – 3,105 meters elevation. Blooms June – July (CNPS 2023).	May occur. Species may occur for this species in the study area. This species is listed as a sensitive species in Clark County (CNPS 2023).
<i>Boechera dispar</i> pinyon rockcress	--/--/1B.3	A perennial herb found on gravelly granitic soils in Joshua tree woodland, pinyon-juniper woodland, and Mojavean desert scrub from 1,200 – 2,540 meters elevation. Blooms March – June (CNPS 2023).	May occur. Species may occur for this species in the study area. This species is listed as a sensitive species in Clark County (CNPS 2023).

ential to Occur³

...r. The Study Area is
...is species known range.

...r. The Study Area is
...is species known range.

...r. The Study Area is
...is species known range.

...r. The Study Area is
...evational range of this

...r. The Study Area is
...is species known range.

...uitable habitat is present
...es in the Study Area and
...s known to occur in Inyo
...S 2023).

...uitable habitat is present
...es in the Study Area and
...s known to occur in Inyo
...S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
<i>Boechera evadens</i> Hidden rockcress	--/--/1B.3/USFS	A perennial herb found in upper montane coniferous forest from 2,560 – 2,855 meters elevation. Blooms May – August (CNPS 2023).	Will not occur outside of the study area.
<i>Boechera pinzlieae</i> Pinz's rockcress	--/--/1B.3/USFS	A perennial herb found in alpine boulder and rock fields and on scree or sandy soils in subalpine coniferous forest from 3,000 – 3,350 meters elevation. Blooms in July (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Boechera shockleyi</i> Shockley's rockcress	--/--/2B.2/USFS	A perennial herb found on rocky or gravelly soils derived from carbonate or quartzite substrates in pinyon-juniper woodland from 875 – 2,310 meters elevation. Blooms May – June (CNPS 2023).	May occur. Study area is within the range for this species in Coconino County (CNPS 2023).
<i>Boechera tiehmii</i> Tiehm's rockcress	--/--/1B.3/USFS	A perennial herb found in granitic alpine boulder and rock fields from 2,970 – 3,590 meters elevation. Blooms July – August (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Boechera tularensis</i> Tulare rockcress	--/--/1B.3, USFS	A perennial herb found on rocky slopes, sometimes roadsides, in subalpine coniferous forest and upper montane coniferous forest from 1,825 – 3,350 meters elevation. Blooms (May) June – July (August) (CNPS 2023).	May occur. Study area is within the range for this species in Coconino County (CNPS 2023).
<i>Botrychium ascendens</i> upswept moonwort	--/--/2B.3/USFS	A perennial non-flowering plant (pteridophyte) found in mesic lower montane coniferous forest and meadows and seeps from 1,115 – 3,045 meters elevation. Reproduces (June) July – August (CNPS 2023).	May occur. Study area is within the range for this species in Coconino County (CNPS 2023).
<i>Botrychium crenulatum</i> scalloped moonwort	--/--/2B.2/USFS	A perennial rhizomatous non-flowering plant (pteridophyte) found in bogs, fens, lower and upper montane coniferous forest, meadows and seeps, freshwater marshes, and swamps from 1,258 – 3,280 meters elevation. Reproduces June – September (CNPS 2023).	May occur. Study area is within the range for this species in Coconino County (CNPS 2023).
<i>Botrychium lineare</i> slender moonwort	--/--/1B.1/USFS	A perennial herb found in disturbed areas in subalpine forest, upper montane coniferous	Will not occur outside of the study area.

tion Plan Area | October 2023

ential to Occur³

er. The Study Area is
is species known range.

er. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		forest, meadows, and seeps from 2,560 – 2,600 meters elevation. No blooming period (CNPS 2023).	
<i>Botrychium lunaria</i> (=neolunaria) common moonwort	--/--/2B.3/USFS	A perennial rhizomatous herb found in subalpine forest, upper montane coniferous forest, meadows and seeps from 1,980 to 3,400 meters elevation. Reproduces in August (CNPS 2023).	Will not occur outside of th
<i>Botrychium minganense</i> mingan moonwort	--/--/4.2/USFS	A perennial rhizomatous non-flowering plant (pteridophyte) found in mesic conditions in bogs and fens, meadow and seep edges, and lower and upper montane coniferous forests from 1,455 – 2,180 meters elevation. Reproduces July – September (CNPS 2023).	Will not occur outside of th
<i>Botrychium paradoxum</i> paradox moonwort	--/--/2B.1/USFS	A perennial rhizomatous herb found in limestone and marble alpine boulder and rock fields, and moist upper montane coniferous forest from 1740 – 4200 meters elevation. Reproduces in August (CNPS 2023)	Will not occur outside of th
<i>Botrychium tunux</i> moosewort	--/--/2B.1/USFS	A perennial rhizomatous herb found on calcareous soils, in alpine boulder rock fields above 3,600 meters elevation. Reproduces August – September (CNPS 2023).	Will not occur outside of th and below its
<i>Bruchia bolanderi</i> Bolander's bruchia	--/--/4.2/USFS	A moss found on damp soil in meadows, seeps, and lower- and upper montane coniferous forests from 1,700 – 2,800 meters elevation. No bloom period (CNPS 2023).	Will not occur outside of th
<i>Calochortus excavatus</i> Inyo County star-tulip	--/--/1B.1/BLM, USFS	A perennial bulbiferous herb found in mesic, alkaline microsites in chenopod scrub, meadows, and seeps from 1,150 – 2,000 meters elevation. Widely distributed throughout the Owens and Chalfant Valleys. Blooms April – July (CNPS 2023).	May occur. S for this speci this species is County (CNP

ential to Occur³

er. The Study Area is
is species known range.

er. The Study Area is
is species known range.

er. The Study Area is
is species known range.

er. The Study Area is
is species known range
s elevational range.

er. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
(S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
<i>Calyptridium pygmaeum</i> pygmy pussypaws	--/--/1B.2/USFS	An annual herb on sandy or gravelly soil in subalpine coniferous forests and upper montane coniferous forest from 1,980 – 3,110 meters elevation. Blooms June – August (CNPS 2023).	Will not occur outside of th
<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i> western single-spiked sedge	--/--/2B.2	A perennial rhizomatous herb found in mesic, often carbonate, microsites in alpine boulder and rock fields, subalpine coniferous forest, meadows, and seeps from 2,990 – 3,700 meters elevation. Blooms July and September (CNPS 2023).	Will not occur below the ele species.
<i>Carex tiogana</i> Tioga Pass sedge	--/--/1B.3/USFS	A perennial herb found on mesic soils in meadows and seeps around lake margins from 3,100 – 3,300 meters elevation. Bloom July – August (CNPS 2023).	Will not occur below the ele species.
<i>Chaetadelpa wheeleri</i> Wheeler's dune-broom	--/--/2B.2	A perennial rhizomatous herb that is found in sandy substrates within desert dunes, Great Basin scrub, and Mojavean desert scrub from 795 – 1900 meters above msl. Blooms April – September (CNPS 2023).	May occur. S for this speci this species i County (CNP
<i>Cladium californicum</i> California saw-grass	--/--/2B.2/USFS	A perennial rhizomatous herb found in meadows, seeps, and alkaline marshes from 60 – 1,600 meters elevation. Blooms June – September (CNPS 2023).	Will not occur outside of th
<i>Crepis runcinata</i> fiddleleaf hawksbeard	--/--/2B.2	A perennial herb found in mesic, alkaline microsites in Mojavean desert scrub and pinyon- juniper woodland from 1,250 – 2,195 meters elevation. Blooms May – August (CNPS 2023).	May occur. S for this speci this species i County (CNP
<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i> Kern Plateau bird's beak	--/--/1B.3/USFS	An annual hemiparasitic herb found in Great Basin scrub, Joshua tree woodland, pinyon- juniper woodland, and upper montane coniferous forest from 1,675 – 3,000 meters	Will not occur outside of th

ion Plan Area | October 2023

ential to Occur³

er. The Study Area is
is species known range.

er. The Study Area is
evational range of this

er. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		elevation. Blooms (May) July – September (CNPS 2023).	
<i>Cryptantha circumscissa</i> var. <i>rosulata</i> Rosette cushion cryptantha	--/--/1B.2/USFS	An annual herb found on granitic or rocky soils in alpine boulder fields and subalpine coniferous forests from 2,950 – 3,660 meters elevation. Blooms July – August (CNPS 2023).	Will not occur outside of th
<i>Cryptantha incana</i> Tulare cryptantha	--/--/1B.3/USFS	An annual herb found on gravelly or rocky soils in lower montane coniferous forests from 1,430 – 2,150 meters elevation. Blooms June – August (CNPS 2023).	Will not occur outside of th
<i>Cusickiella quadricostata</i> Bodie Hills cusickiella	--/--/1B.2/BLM	A perennial herb found on clay, rocky soils in Great Basin scrub and pinyon and juniper woodland from 2,000 – 2,800 meters elevation. Blooms May – July (CNPS 2023).	Will not occur outside of th
<i>Dedeckera eurekaensis</i> July gold	--/SR/1B.3/BLM, USFS	A moss found on carbonate soils in Mojavean desert scrub from 1,215 -2,200 meters elevation (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Delphinium inopinum</i> unexpecteded larkspur	--/--/4.3/USFS	A perennial herb found on metamorphic, rocky soils in upper montane coniferous forest from 1,890 – 2,800 meters elevation. Blooms May – July (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Dermatocarpon meiophyllizum</i> Silverskin lichen	--/--/2B.3	An aquatic foliose lichen found in aquatic habitats in coastal prairie, lower and upper montane coniferous forest, North Coast coniferous forest and subalpine coniferous forest from 295 – 3,495 meters elevation (CNPS 2023).	Will not occur outside of th
<i>Draba asterophora</i> var. <i>asterophora</i> Tahoe draba	--/--/1B,2/USFS	A perennial herb found in alpine boulder and rock field, and subalpine coniferous forest from 2,500 – 3,505 meters elevation. Blooms July – August (September) (CNPS 2023).	Will not occur outside of th

ion Plan Area | October 2023

ential to Occur³

ar. The Study Area is
is species known range.

ar. The Study Area is
is species known range.

ar. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

ar. The Study Area is
is species known range.

ar. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
<i>Draba cruciata</i> Mineral King draba	--/--/1B.3/USFS	A perennial herb found on gravelly soils in subalpine coniferous forest from 2,500 – 3,315 meters elevation. Blooms June – August (CNPS 2023).	Will not occur outside of the study area.
<i>Draba incrassata</i> Sweetwater Mountains draba	USFS	A perennial stoloniferous herb found on rhyolitic talus in alpine boulder and rock fields from 2,500 – 3,965 meters elevation. Blooms July – August (CNPS 2023).	Will not occur outside of the study area.
<i>Draba lonchocarpa</i> spear-fruited draba	--/--/2B.3	A perennial herb found on scree derived from carbonate substrates within alpine boulder and rock fields from 3,000 – 3,295 meters above msl. Blooms June – July (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Draba monoensis</i> White Mountains draba	--/--/1B.2/USFS	A perennial herb found in alpine boulder and rock fields, and meadows and seeps from 3,000 – 3,960 meters elevation. Blooms August (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Draba sharsmithii</i> Mt. Whitney draba	--/--/1B.3/USFS	A perennial herb found in alpine boulder and rock fields, and subalpine coniferous forests from 3,300 – 3,960 meters elevation. Blooms July – August (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Draba sierrae</i> Sierra draba	--/--/1B.3	A perennial herb found on granitic or carbonate soils in alpine boulder and rock fields from 3,500 – 4,265 meters elevation. Blooms (May) June – August (CNPS 2023).	Will not occur below the elevation of the study area.
<i>Elodium (=Helodium) blandowii</i> Blandow's bog moss	--/--/2B.2/USFS	A moss occurring in damp soil in meadows and seeps, and subalpine coniferous forest from 1,862 – 2,700 meters elevation. (CNPS 2023)	Will not occur outside of the study area.
<i>Elymus salina</i> Salina Pass wild-rye	--/--/2B.3	A perennial rhizomatous herb found on rocky soils in pinyon-juniper woodland from 1,350 – 2,135 meters elevation. Blooms May – June (CNPS 2023).	May occur. Study area is suitable for this species. This species is native to the study area (County (CNPS 2023)).
<i>Epilobium palustre</i> marsh willowherb	--/--/2B.3	A perennial rhizomatous herb in bogs, fens, and mesic meadows and seeps. No specified elevation. Blooms July – August. Known in CA	Will not occur outside of the study area.

ential to Occur³

er. The Study Area is
is species known range.

er. The Study Area is
is species known range.

er. The Study Area is
evational range of this

er. The Study Area is
evational range of this

er. The Study Area is
evational range of this

er. The Study Area is
evational range of this

er. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
(S 2023).

er. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pote
		only from Grass Lake (ELD Co.) and Willow Lake (PLU Co.) (CNPS 2023).	
<i>Ericameria gilmanii</i> Gilman's goldenbush	--/--/1B.3/USFS	A perennial shrub found rocky carbonate or granitic soils in subalpine coniferous forest and upper montane coniferous forest from 2,100 – 3,400 meters elevation. Blooms August – September (CNPS 2023).	May occur. Su for this specie this species is County (CNPS
<i>Erigeron calvus</i> Bald daisy	--/--/1B.1/BLM	A perennial herb found in Great Basin scrub at 1,200 meters elevation. Blooms March – July (CNPS 2023).	Will not occur outside of this and the Study elevational ra
<i>Erigeron aequifolius</i> Hall's daisy	--/--/1B.3/BLM, USFS	An perennial rhizomatous herb found on rocky, granitic soils in broadleaf forests, lower montane coniferous forests, pinyon and juniper woodlands, and upper montane coniferous forests from 1,500 – 2,440 meters elevation. Blooms June – August (CNPS 2023).	Will not occur outside of this
<i>Erigeron multiceps</i> Kern River daisy	--/--/1B.2/USFS	A perennial herb found in meadows, seeps and openings in upper montane coniferous forests from 1,500 – 2,535 meters elevation. Known only from the Kern Plateau. Blooms June – September (CNPS 2023).	Will not occur outside of this
<i>Erigeron uncialis var. uncialis</i> Limestone daisy	--/--/1B.2/USFS	A perennial herb found on carbonate substrates in Great Basin scrub, pinyon-juniper woodland, and subalpine coniferous forest from 1,900 – 2,900 meters elevation. Blooms May – July (CNPS 2023).	May occur. Su for this specie this species is County (CNPS
<i>Eriogonum alexanderae</i> Alexander's buckwheat	--/--/1B.1/BLM	A perennial herb found in shale or gravelly microsities in Great Basin scrub, and pinyon-juniper woodland at 2,895 meters elevation. Blooms March – July (CNPS 2023).	Will not occur outside of this and the Study elevational ra
<i>Eriogonum eremicola</i> Wildrose Canyon buckwheat	--/--/1B.3/BLM	An annual herb found on sandy or gravelly soils in upper montane coniferous forest and pinyon-juniper woodland from 2,200 – 3,100	Will not occur outside of this

Potential to Occur³

uitable habitat is present
s in the Study Area and
known to occur in Inyo
2023).

r. The Study Area is
s species known range
Area is above the
nge of this species.

r. The Study Area is
s species known range.

r. The Study Area is
s species known range.

uitable habitat is present
s in the Study Area and
known to occur in Inyo
2023).

r. The Study Area is
s species known range
Area is below the
nge of this species.

r. The Study Area is
s species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		meters elevation. Blooms June – September (CNPS 2023).	
<i>Eriogonum meniscola</i> Pinyon Mesa buckwheat	--/--/1B.3/BLM	A perennial herb found in rocky or gravelly microsites in Great Basin scrub, pinyon-juniper woodland, upper montane coniferous forest from 1,800 – 2,805 meters elevation. Blooms July – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Eriogonum microthecum</i> var. <i>panamintense</i> Panamint Mountains buckwheat	--/--/1B.3/BLM	A perennial deciduous shrub found in rocky microsites in pinyon-juniper woodland and subalpine coniferous forest from 1,890 – 3,250 meters elevation. Blooms June – October (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Eriogonum wrightii</i> var. <i>olanchense</i> Olancho Peak buckwheat	--/--/1B.3/USFS	A perennial herb found in rocky or gravelly microsites in alpine boulder and rock field, subalpine coniferous forest from 3,260 – 3,535 meters elevation. Blooms July – September (CNPS 2023).	Will not occur outside of th and the Stud elevational r
<i>Fimbristylis thermalis</i> Hot springs fimbristylis	--/--/2B.3	A perennial rhizomatous herb found in alkaline microsites near hot springs from 110 – 1,340 meters elevation. Blooms July – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Hesperidanthus jaegeri</i> Jaeger's hesperidanthus	--/--/1B.2/BLM, USFS	A perennial herb found in carbonate rocky microsites in Great Basin scrub, pinyon-juniper woodland, and subalpine coniferous forest from 2,135 – 2,800 meters elevation. Known only from the Inyo Mountains. Blooms May – July (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Horkelia hispidula</i> White Mountains horkelia	--/--/1B.3/USFS	A perennial herb found in alpine dwarf scrub, Great Basin scrub, and subalpine coniferous forest from 3,000 – 3,400 meters elevation. Blooms July – August (CNPS 2023).	Will not occur outside of th and the Stud elevational r
<i>Hulsea brevifolia</i> Short-leaved hulsea	--/--/1B.2/USFS	A perennial herb on granitic, volcanic or sandy soil in lower montane coniferous forest, and upper montane coniferous forest from 1,500 –	Will not occur outside of th

ential to Occur³

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range
y Area is below the
ange of this species.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range
y Area is below the
ange of this species.

r. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		3,200 meters elevation. Blooms May – August (CNPS 2023).	
<i>Hulsea vestita ssp. inyoensis</i> Inyo hulsea	--/--/2B.2	A perennial herb found on rocky soils in chenopod scrub, Great Basin scrub, and pinyon-juniper woodland from 1,645 – 3,000 meters elevation. Blooms April – June (CNPS 2023).	May occur. S for this species; this species is in Inyo County (CNPS 2023).
<i>Ivesia kingii var. kingii</i> alkali ivesia	--/--/2B.2/BLM	A perennial herb found on mesic, alkaline, clay soils in Great Basin scrub, meadows, seeps, and playas from 1,200 – 2,130 meters elevation. Known from the Chalfant, Long, and northern Owens valleys. Blooms May – August (CNPS 2023).	May occur. S for this species; this species is in Inyo County (CNPS 2023).
<i>Loeflingia squarrosa var. artemisiarum</i> sagebrush loeflingia	--/--/2B.2/BLM	An annual herb found on sandy soils in Great Basin scrub and Sonoran desert scrub, and on desert dunes, from 700 – 1,615 meters elevation. Blooms April – May (CNPS 2023).	May occur. S for this species; this species is in Inyo County (CNPS 2023).
<i>Lupinus duranii</i> Mono Lake lupine	--/--/1B.2/BLM, USFS	A perennial herb found on volcanic pumice and gravel in Great Basin scrub, upper montane coniferous forest, and subalpine coniferous forest from 2,000 – 3,000 meters elevation. Blooms May – August (CNPS 2023).	Not expected. S present for this species; this species is not known to occur in the Study Area however it is present in Mono County (CNPS 2023).
<i>Lupinus lepidus var. culbertsonii</i> Hocket Meadows lupine	--/--/1B.3/USFS	A perennial herb found in meadows, seeps, and mesic, rocky soils in upper montane coniferous forests from 2,440 – 3,000 meters elevation. Blooms July – August (CNPS 2023).	Will not occur. S outside of the Study Area (CNPS 2023).
<i>Lupinus magnificus var. hesperius</i> McGee Meadows lupine	--/--/1B.3/BLM	A perennial herb found on sandy soils in Great Basin scrub and upper montane coniferous forest from 1,260 – 1,830 meters elevation. Blooms April – June (CNPS 2023).	May occur. S for this species; this species is in Inyo County (CNPS 2023).
<i>Lupinus magnificus var. magnificus</i> Panamint Mountains lupine	--/--/1B.2/BLM	A perennial herb found in Mojavean desert scrub, Great Basin scrub, pinyon-juniper woodland, and upper montane coniferous	Not expected. S present for this species; this species is not known to occur in the Study Area however it is present in Mono County (CNPS 2023).

ential to Occur³

Suitable habitat is present in the Study Area and is known to occur in Inyo County (CNPS 2023).

Suitable habitat is present in the Study Area and is known to occur in Inyo County (CNPS 2023).

Suitable habitat is present in the Study Area and is known to occur in Inyo County (CNPS 2023).

d. Suitable habitat is present in the Study Area for this species is not known to occur in Inyo County but is known to occur in Mono County (CNPS 2023).

r. The Study Area is outside of the known range of this species.

Suitable habitat is present in the Study Area and is known to occur in Inyo County (CNPS 2023).

d. Suitable habitat is present in the Study Area for this species is not known to occur in Inyo County but is known to occur in Mono County (CNPS 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		forest from 1,000 – 2,545 meters elevation. Blooms April – June (July) (CNPS 2023).	limited to the (CNPS 2023).
<i>Lupinus padre-crowleyi</i> Father Crowley's lupine	--/SR/1B.2/USFS	A perennial herb found on decomposed granite substrates in Great Basin scrub, riparian scrub, riparian forest, and upper montane coniferous forest from 2,200 – 4,000 meters elevation. Blooms June – August (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Meesia uliginosa</i> Broad-nerved humpmoss	--/--/2B.2/USFS	A moss found in damp soil in bogs and fens, meadows and seeps, subalpine forest and upper montane coniferous forest from 1,210 – 2,804 meters elevation. No blooming period (CNPS 2023).	Will not occur outside of th
<i>Mentzelia inyoensis</i> Inyo blazing star	--/--/1B.1/BLM, USFS	A perennial herb found on rocky, sometimes carbonate, soils in Great Basin scrub and pinyon-juniper woodland from 1,158 – 1,980 meters elevation. Blooms April – October (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Mentzelia torreyi</i> Torrey's blazing star	--/--/2B.2	A perennial herb found on alkaline sandy or rocky, usually volcanic, soils Great Basin scrub, Mojavean desert scrub, and pinyon-juniper woodland from 1,170 – 2,835 meters elevation. Blooms June – August (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Monardella beneolens</i> Sweet-smelling monardella	--/--/1B.3/USFS	A perennial rhizomatous herb found on granitic soils in alpine boulder fields and rock fields, subalpine coniferous forest, and upper montane coniferous forest from 2,475 – 3,500 meters elevation. Blooms June – September (CNPS 2023).	Will not occur outside of th
<i>Myurella julacea</i> small mousetail moss	--/--/2B.3	A moss found on damp rock and soil in alpine boulder and rock fields, and subalpine coniferous forest from 2,700 – 3,000 meters elevation. No blooming period (CNPS 2023).	Will not occur below the ele species and s present for th
<i>Oreocarya roosiorum</i> Bristlecone cryptantha	--/SR/1B.2/BLM	A perennial herb found on rocky carbonate soils in subalpine coniferous forest 2,440 –	May occur. S for this speci

ential to Occur³

e Death Valley region

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range.

r. The Study Area is
evational range of this
uitable habitat is not
his species.

uitable habitat is present
es in the Study Area and

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		3,230 meters elevation. Known only from the Mazourka Peak area in the Inyo Mountains. Blooms June – July (CNPS 2023).	this species is County (CNPS)
<i>Oryctes nevadensis</i> Nevada oryctes	--/--/2B.1	An annual herb found on sandy soils in chenopod scrub and Mojavean desert scrub from 1,100 – 2,535 meters elevation. Widely distributed in the Owens Valley. Blooms April – June (CNPS 2023).	May occur. S for this speci this species is County (CNPS)
<i>Packera indecora</i> rayless mountain ragwort	--/--/2B.2	A perennial herb found in mesic meadows and seeps from 1,600 – 2,000 meters elevation. Blooms July – August (CNPS 2023).	Will not occur. outside of th
<i>Parnassia parviflora</i> small-flowered grass-of-parnassus	--/--/2B.2	A perennial herb found on mesic soils in meadows and seeps from 2,000 – 2,855 meters elevation. Blooms August – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS)
<i>Peltigera gowardi</i> Veined water lichen	--/--/4.2/USFS	A foliose aquatic lichen found in riparian forest from 1,065 – 2,620 meters elevation. No bloom period (CNPS 2023).	Will not occur. outside of th
<i>Perityle inyoensis</i> Inyo rock daisy	--/--/1B.2/BLM	A perennial herb found on rocky carbonate soils in Great Basin scrub and pinyon-juniper woodland from 1,800 – 2,710 meters elevation. Known from the southern Inyo and Coso Mountains. Blooms June – August (CNPS 2023).	May occur. S for this speci this species is County (CNPS)
<i>Petrophytum caespitosum ssp. acuminatum</i> marble rockmat	--/--/1B.3/USFS	A perennial evergreen shrub on carbonate or granitic, rocky soils in lower- and upper montane coniferous forests from 1,015 – 2,300 meters elevation. Blooms August – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS)
<i>Phacelia inyoensis</i> Inyo phacelia	--/--/1B.2/BLM, USFS	An annual herb found in alkaline meadows and seeps from 915 – 3,200 meters elevation. Widely distributed throughout the Owens, Chalfant, and Long valleys. Blooms April – August (CNPS 2023).	May occur. S for this speci this species is County (CNPS)

ion Plan Area | October 2023

Potential to Occur³

s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

r. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
<i>Phacelia monoensis</i> Mono County phacelia	--/--/1B.1/BLM, USFS	An annual herb found on clay soils, often on roadsides, in Great Basin scrub and pinyon-juniper woodland from 1,900 – 2,900 meters elevation. Blooms May – July (CNPS 2023).	Will not occur outside of th
<i>Phacelia novemmillensis</i> Nine Mile Canyon phacelia	--/--/1B.2/BLM, USFS	An annual herb found in broadleaved upland forest, cismontane woodland, upper montane coniferous forest, and pinyon-juniper woodland from 1,645 – 2,640 meters elevation. Blooms May – June (CNPS 2023).	Will not occur outside of th
<i>Pinus albicaulis</i> White bark pine	FP/--/--/BLM	A gymnosperm found in red fir coniferous forest and subalpine forests to timberline from 2,000 – 3,700 meters elevation. No bloom period (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Plagiobothrys parishii</i> Parish's popcornflower	--/--/1B.1/BLM, USFS	An annual herb found in mesic alkaline microsites in Great Basin scrub and Joshua tree woodland from 750 – 1,400 meters elevation. Widely distributed in Owens Valley. Blooms March – June (November) (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Poa lettermanii</i> Letterman's blue grass	--/--/2B.3	A perennial herb found on sandy or rocky soils in alpine boulder and rock fields from 3,500 – 4,265 meters elevation. Blooms July – August (CNPS 2023).	Will not occur below the ele species.
<i>Pohlia tundrae</i> tundra thread moss	--/--/2B.3	A moss found on gravelly, damp soil in alpine boulder and rock fields from 2,700 – 3,000 meters elevation. No blooming period (CNPS 2023).	Will not occur below the ele species and s present for th
<i>Polemonium chartaceum</i> Mason's sky pilot	--/--/1B.3/USFS	A perennial herb found on rocky serpentine, granitic, or volcanic soils in alpine boulder and rock fields and subalpine coniferous forest from 3,290 – 4,270 meters elevation. Blooms June – August (CNPS 2023).	Will not occur below the ele species.
<i>Polycytenium williamsiae</i> William's combleaf	--/--/1B.2/BLM, USFS	A perennial herb found in Great Basin scrub, marshes, swamps, pinyon and juniper woodland, playas and vernal pools from 1,347	Will not occur outside of th

ential to Occur³

rr. The Study Area is
is species known range.

rr. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

rr. The Study Area is
evational range of this

rr. The Study Area is
evational range of this
uitable habitat is not
his species.

rr. The Study Area is
evational range of this

rr. The Study Area is
is species known range.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		– 2,700 meters elevation. Blooms March – July (CNPS 2023).	
<i>Potamogeton robbinsii</i> Robbins' pondweed	--/--/2B.3	A perennial, aquatic rhizomatous herb found in deep water, lakes, marshes and swamps from 1,530 – 3,300 meters elevation. Blooms July – August (CNPS 2023).	Will not occur. not provide habitat for th
<i>Potentilla morefieldii</i> Morefield's cinquefoil	--/--/1B.3/USFS	A perennial herb found on carbonate substrates in alpine boulder and rock fields from 3,265 – 4,000 meters elevation. Blooms July – September (CNPS 2023).	Will not occur. below the ele species.
<i>Ranunculus hydrocharoides</i> frog's-bit buttercup	--/--/2B.1	A perennial aquatic herb found in freshwater marshes and swamps from 1,100 – 2,700 meters elevation. Blooms (May) June – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Sabulina stricta</i> bog sandwort	--/--/2B.3	A perennial herb found in alpine boulder and rock fields, alpine dwarf scrub, and meadows, and seeps from 2,440 – 3,960 meters elevation. Blooms July – September (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Sarcobatus baileyi</i> Bailey's greasewood	--/--/2B.3	A perennial deciduous shrub found in alkaline microsites in dry lakes, washes, and roadsides in chenopod scrub from 1,500 – 1,600 meters elevation. Known from the Fish Lake Valley and the Coso Range. Blooms April – July (CNPS 2023).	May occur. S for this speci this species is County (CNPS
<i>Senecio pattersonensis</i> Mount Patterson senecio	--/--/1B.3/USFS	A perennial herb found in alpine boulder and rock fields from 2,900 – 3,720 meters elevation. Blooms July – September (CNPS 2023).	Will not occur. outside of th
<i>Sidalcea covillei</i> Owens Valley checkerbloom	--/SE/1B.1/BLM	A perennial herb found in mesic alkaline microsites in chenopod scrub, meadows, and seeps from 1,095 – 1,415 meters elevation. Widely distributed throughout Owens Valley. Blooms April – June (CNPS 2023).	May occur. S for this speci this species is County (CNPS

ential to Occur³

er. The Study Area does
deep water marsh
his species.

er. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
<i>Solorina spongiosa</i> fringed chocolate chip lichen	--/--/2B.2	A crustose lichen found on moss mats in carbonate substrates at seeps in subalpine coniferous forest. No elevation range specified. Known from 1 location on Mount Thompson. No blooming period (CNPS 2023).	Will not occur outside of the study area and subalpine forest. This species is not present.
<i>Streptanthus gracilis</i> alpine jewel-flower	--/--/1B.3/ USFS	An annual herb found on rocky or granitic rocky soils in subalpine coniferous forest and upper montane coniferous forest from 2,800 – 3,500 meters elevation. Blooms July – August (CNPS 2023).	Will not occur outside of the study area.
<i>Streptanthus oliganthus</i> Masonic Mountain jewel-flower	--/--/1B.2/BLM, USFS	A perennial herb found on rocky volcanic or granitic rocky soils in pinyon-juniper woodland from 1,980 – 3,050 meters elevation. Blooms June – July (CNPS 2023).	Will not occur outside of the study area.
<i>Thelypodium integrifolium ssp. complanatum</i> foxtail thelypodium	--/--/2B.2	An annual or perennial herb found in alkaline or subalkaline mesic microsites in seeps and Great Basin scrub from 1,100 – 2,500 meters elevation. Widely distributed in the northern Owens Valley and Long Valley. Blooms June – October (CNPS 2023).	May occur. Species may occur for this species in the study area. This species is present in Inyo County (CNPS 2023).
<i>Tonestus peirsonii</i> Peirson's tonestus	--/--/4.3	A perennial rhizomatous herb found on alpine boulder and subalpine coniferous forest in rocky areas from 2,900 – 3,700 meters elevation. Blooms in July – August (CNPS 2023).	Will not occur below the elevation of the study area species.
<i>Trichophorum pumilum</i> little bulrush	--/--/2B.2	A perennial rhizomatous herb found on carbonate substrates on riverbanks, bogs, fens, marshes, swamps, and riparian scrub from 2,860 – 3,250 meters elevation. Blooms in August (CNPS 2023).	Will not occur below the elevation of the study area species.
<i>Trifolium dedeckerae</i> Dedecker's clover	--/--/1B.3/BLM, USFS	A perennial herb found on granitic and rocky soils in lower montane coniferous forest, pinyon juniper woodland, subalpine coniferous forest, and upper montane coniferous forest,	May occur. Species may occur for this species in the study area. This species is present in Inyo County (CNPS 2023).

ential to Occur³

er. The Study Area is
is species known range,
e coniferous forests are

er. The Study Area is
is species known range.

er. The Study Area is
is species known range.

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

er. The Study Area is
evational range of this

er. The Study Area is
evational range of this

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		from 2,100 – 3,500 meters elevation. Blooms in May – July (CNPS 2023).	
<i>Triglochin palustris</i> marsh arrow-grass	--/--/2B.3	A perennial rhizomatous herb found in mesic microsites in meadows, seeps, marshes, and subalpine coniferous forests, and freshwater marshes and swamps from 2,285 – 3,700 meters elevation. Blooms July – August (CNPS 2023).	May occur. S for this speci for this speci this species is County (CNP
<i>Viola pinetorum ssp. grisea</i> grey-leaved violet	--/--/1B.2/BLM	A perennial herb found in meadows, seeps, subalpine coniferous forests, and upper montane coniferous forests from 1,500 – 3,400 meters elevation. Blooms April – July (CNPS 2023).	May occur. S for this speci for this speci this species is County (CNP
<i>Yucca brevifolia</i> Western Joshua tree	--/SC/--/BLM	A tree that occurs in desert flats and slopes from 400 – 2,300 meters elevation. Blooms from March – May (eFlora 2023).	May occur. S for this speci for this speci known to occ
Animals			
Invertebrates			
<i>Bombus crotchii</i> crotch bumble bee	--/SCE/--	Crotch bumble bees occur in grassland and scrub habitats (California Department of Fish and Wildlife [CDFW] 2019). New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows (CDFW 2019). This species is a generalist forager and has been reported visiting a wide variety of flowering plants. A short-tongued bumble bee; food plants include <i>Asclepias</i> spp., <i>Antirrhinum</i> spp., <i>Clarkia</i> spp., <i>Eschscholzia</i> spp., <i>Eriogonum</i> spp., <i>Chaenactis</i> spp., <i>Lupinus</i> spp., <i>Medicago</i> spp., <i>Phacelia</i> spp., and <i>Salvia</i> spp. (Koch et al. 2012). The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the	May occur. S for this speci for this speci records in th species in th County (CDF

ion Plan Area | October 2023

ential to Occur³

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es in the Study Area and
s known to occur in Inyo
S 2023).

uitable habitat is present
es, and this species is
cur in Inyo County.

uitable habitat is present
es in the Study Area and
e CNDDDB document this
e Mono County and Inyo
W 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		following spring (CDFW 2019). Rare throughout its range and in decline in the Central Valley and southern California (CDFW 2019).	
<i>Danaus plexippus pop. 1</i> monarch butterfly	FC/--/--	The federal listing on December 17, 2020, was for overwintering populations of Monarch butterflies that roost in wind protected tree groves, especially with <i>Eucalyptus</i> sp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed (<i>Asclepias</i> sp.) (Nial et al. 2019 and USFWS 2020). Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring (USFWS 2020). The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east (USFWS 2020).	Present. The narrow-leaf monarch butterfly was observed along Pine Creek in 2023. Adult monarchs were also observed along Pine Creek in 2023. It is determined that the monarch butterfly is present in the Study Area and is also present in other areas.
<i>Euphydryas editha monoensis</i> Mono Lake checkerspot butterfly	--/--/--/USFS	Occurs in pinyon-juniper woodland, meadows, mountain slopes on the east slope of the Sierra Nevada and western edge of the Great Basin.	May occur. The known range is in the Sierra Nevada.
<i>Plebulina emigdionis</i> San Emigdio blue butterfly	--/--/--/USFS	Occurs in the western and southwestern margins of the Mojave Desert.	Will not occur. The species is found outside of the Study Area.
<i>Pyrgulopsis owensensis</i> Owen's Valley springsnail	--/--/--/USFS	Found in escarpments of the White and Inyo Mountains along the east side of Owens Valley. This species occurs in small springs (Furnish 2007).	Will not occur. The species is found outside of the Study Area.
<i>Pyrgulopsis wongi</i> Wong's springsnail	--/--/--/USFS	Found in perennial springs, seeps and spring-runs in the Inyo National Forest along the	May occur. The known range is in the Inyo National Forest.

tion Plan Area | October 2023

ential to Occur³

larval host plant,
milkweed was observed
Creek Road in August
monarch butterflies were
d near the milkweed
Creek. This species was
to be present in the
and can be assumed to be
other localities if milkweed
nt.

The Study Area is within
range of this species.

er. The Study Area is
e known range of this

er. The Study Area is
e known range of this

The Study Area is within
range of this species, and

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pote
		western side of the Owens Valley (Furnish 2007).	this species co seeps.
<i>Speyeria nokomis apacheana</i> Apache silverspot butterfly	--/--/--/USFS	Occurs in small habitat patches in seeps, springs, and riparian habitats of the central and western Great Basin (USFWS 2021).	May occur. Th the known ran
Fishes			
<i>Catostomus fumeiventris</i> Owens sucker	--/--/SSC	Large (15 cm) fish common throughout the Owens River and Bishop Creek systems. Found in streams with long reaches, few riffles, and fine substrates with few cobbles, and found in lakes near the bottom, regardless of depth (Moyle et al. 2015).	May occur. Th the Owens Riv occur in the O tributaries, pa area.
<i>Cyprinodon nevadensis amargosae</i> Amargosa River pupfish	--/--/--/BLM	This species is limited to the Amargosa River watershed in Inyo County (Moyle et al. 2015).	Will not occur outside of the species.
<i>Cyprinodon radiosus</i> Owens pupfish	FE/SE/--	A small fish (< 2.5 inches in length) that is currently known from 4 locations: Fish Slough, Mule Springs, well 368, and Warm Springs (USFWS 2009a). This species congregates in small schools, feeds mostly on aquatic insects, and spawns over soft substrates in the spring and summer. Non-native predators such as bass, brown trout, and bluegill pose a serious threat to this species (USFWS 2009a).	Will not occur outside of the species.
<i>Oncorhynchus clarkia seleniris</i> Paiute cutthroat trout	FT/--/--	This subspecies of cutthroat trout is limited to 11.5 miles of stream habitat in the Silver King Creek basin, which is tributary to the East Fork Carson River. This species native range occurs entirely upstream of Llewellyn Falls along Silver King Creek and all accessible tributaries. This inland trout species has been introduced into several other lakes and streams in California and has at least four self-sustaining populations that have been established outside	Will not occur outside of the species, which Creek, a tribu Carson River. populations a County, but a Study Area (C

on Plan Area | October 2023

Potential to Occur³

could occur in springs and

The Study Area is within
range of this species.

This species is limited to
Silver King watershed and could
be found in Owens River and its
tributaries, particularly in the Bishop

area. The Study Area is
within the known range of this

area. The Study Area is
within the known range of this

area. The Study Area is
within the known range of this
species, which is limited to Silver King
watershed and tributary to the East Fork
Owens River. However, transplanted
individuals are present in Inyo
County but are not present in the
Study Area (CDFW 2023).

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		the historic range, which includes North Fork Cottonwood Creek and Cabin Creek in Inyo County (USFWS 2004). Inhabits cold waters of alpine lakes and streams. This species is sensitive to the presence of other salmonids and requires gravel riffles in streams for spawning.	
<i>Oncorhynchus mykiss aguabonita</i> California golden trout	--/--/SSC/USFS	Occur in cold, clear alpine streams in the southern Sierra Nevada above 2,300 meters elevation. This species is endemic to the South Fork Kern River and its tributary streams. This species as also been broadly transplanted outside of its historic range throughout the Sierra Nevada and the Rocky Mountains, where it has hybridized with rainbow trout (Moyle et al. 2015).	Will not occur outside of the species, and the Kern River is widely planted by agencies across
<i>Rhinichthys osculus ssp. 2</i> Owens speckled dace	--/--/SSC	The Owens speckled dace has been extirpated from a majority of its historic range; however, three populations remain: in Fish Slough, Round Valley, and in irrigation ditches in and near the City of Bishop. Known to occupy a variety of habitats, ranging from small cold water streams to hot-spring systems, although they are rarely found in water exceeding 29°C. They currently persist at two Long Valley sites (Whitmore Hot Springs and Little Alkali Lake), one East Fork Owens River site near Benton (a spring on Mathieu Ranch/Lower Marble Creek), and live sites in the northern Owens Valley (North McNally Ditch, North Fork Bishop Creek, irrigation ditch in north Bishop, Lower Horton Creek, and Lower Pine and Rock creeks) (Moyle et al. 1995).	May occur. The Owens River occurs in the tributaries, particularly in the area.
<i>Siphateles bicolor ssp. snyderi</i> Owens tui chub	FE/SE/--	An endemic fish (1.5 -18 cm) to the Owens Basin that inhabits clear, slow-moving water	May occur. The Owens River

ion Plan Area | October 2023

ential to Occur³

er. The Study Area is
 e known range of this
 this species is limited to
 er drainage. This species
 nted by resources
 oss the Sierra Nevada.

This species is limited to
 iver watershed and could
 Owens River and its
 articularly in the Bishop

This species is limited to
 iver watershed and could

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pote
		with aquatic vegetation and cover. Spawning occurs in late winter to early summer, usually over gravel or aquatic vegetation (USFWS 2009b). Presumed extirpated in the wild or genetically swamped by hybridization with exotic Lahontan tui chub (USFWS 1998). Currently restricted to six isolated sites, all of which have been artificially created or altered and include: Little Hot Creek Pond, Hot Creek Headwaters, Sotcher Lake, Upper Owens Gorge, White Mountain Research Station, and Mule Spring (USFWS 2009b).	occur in the O tributaries.
Amphibians			
<i>Anaxyrus canorus</i> Yosemite toad	FT/--/SSC/USFS	A high elevation toad that breeds in wet meadows and snowmelt pools from 1,460 – 3,360 m. This species has a maximum known upland movement of 1.09 miles from breeding ponds. In uplands, springheads and seeps are important upland habitat for this species. They also utilize ground cover, such as mammal burrows, logs, rocks (USFWS 2014).	Not expected expected to o but could occ portions of th west.
<i>Anaxyrus exsul</i> black toad	--/ST/FP/BLM, USFS	This species occurs in springs, water courses, marshes, and wet meadows between the White Mountains and the Inyo Mountains in Deep Springs Valley (Zeiner et al. 1990).	Will not occur outside of the species.
<i>Batrachoseps campi</i> Inyo Mountain salamander	--/--/SSC/BLM, USFS	This species is limited to canyons of the Inyo Mountains. This species is associated with freshwater seeps and springs in steep walled canyons and boulder strewn canyons (Zeiner et al. 1990).	Will not occur outside of the species.
<i>Hydromantes platycephalus</i> Mount Lyell salamander	--/--/SSC	Inhabits massive rock areas in mixed conifer, red fir, lodgepole pine, and subalpine habitats from 1,260 – 3,640 meters above msl. This species only occurs in the Sierra Nevada range from Placer County south to Tulare County and	May occur. Su in the Study A to semi-perma present, such its tributaries.

on Plan Area | October 2023

Potential to Occur³

Owens River and its

. This species is not
occur in the Study Area
ur in higher elevation
e Study Area to the

r. The Study Area is
known range of this

r. The Study Area is
known range of this

uitable habitat is present
area where permanent
anent aquatic habitat is
as the Owens River and

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		an isolated population in Sierra County (Jennings and Hayes 1994).	
<i>Lithobates pipiens</i> Northern leopard frog	--/--/SSC	A highly aquatic frog that is found near quiet, permanent and semi-permanent water in many habitats from sea level to 2,130 meters above msl. Native range of this species is east of the Sierra Nevada – Cascade Crest, other occurrences in California are introduced. Species requires shoreline cover, submerged/emergent aquatic vegetation for cover and reproduction, which occurs from December to June. Home range is unknown, most adults likely move less than 12 meters, but make unpredictable and potentially extensive movements during or immediately following warm rains (Zeiner et al. 1990).	May occur. S in the Study to semi-perm present, such its tributaries
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	FE/ST/--/USFS	A high elevation frog that requires permanent water bodies that do not freeze solid over winter, which may include lakes, streams, tarns, perennial plunge pools in intermittent streams. Aquatic habitat for overwintering must be a minimum of 5.6 feet, but 8.2 feet or deeper or other habitat structures is preferred to avoid freezing conditions (USFWS 2016). Tadpoles require two years to develop, so water bodies that do not freeze solid or dry up during normal years are essential (USFWS 2016). This species has a maximum known upland movement of 82 feet from streams and up to 984 feet between water bodies around lakes (USFWS 2016).	May occur. S in the Study, species occur the Study Area aquatic habit present in th the Study Area habitats.
<i>Rana muscosa</i> Mountain yellow-legged frog (Northern California DPS)	FE/SE/--	Southern mountain yellow-legged frog has historically inhabited rocky and shaded streams on desert and coastal slopes from 370 to 2,290 m (1,200 to 7,500 ft) in elevation, with	Will not occur outside of th species.

ion Plan Area | October 2023

ential to Occur³

uitable habitat is present
 Area where permanent
 nant aquatic habitat is
 n as the Owens River and
 S.

uitable habitat is present
 Area for this species. This
 rs further to the west in
 ea in high elevation
 cats. Critical habitat is
 e western boundaries of
 ea in high elevation

r. The Study Area is
 e known range of this

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		cool waters originating from springs and snowmelt. Individuals are most often found in creeks with permanent water in at least some portion of the reach. Mountain yellow-legged frogs seem to be absent from the smallest creeks, probably because these have insufficient depth for adequate refuge and overwintering habitat. Pools usually had some type of structure that could function as refugia such as bank overhangs, rocks, and downfall logs or branches (USFWS 2012).	
Reptiles			
<i>Elgaria panamintina</i> Panamint alligator lizard	--/--/SSC/BLM	The Panamint alligator lizard occurs only in Inyo and southeastern Mono counties. It has been found in the White and Inyo mountains to the north and west and in the Panamint range to the south and east. Elevations range from 960-2290 m. Found near permanent water in canyons, damp gullies, and rocky areas near dense vegetation (Zeiner et al. 1990).	Not expected. Species is not present for the Study Area; however, it is known to occur in the White Mountains of the Study Area.
<i>Sceloporus graciosus graciosus</i> Northern sagebrush lizard	--/--/--/BLM	Occurs in sagebrush and other shrubland dominated habitats with open space for basking. This species occurs in the Great Basin east of the Sierra Nevada and in the northeast corner of California (Stebbins 2003).	May occur. Species is present in the Study Area.
Birds			
<i>Accipiter gentilis</i> Northern goshawk	--/--/SSC/BLM, USFS	Nests and forages in mature and old-growth forest stands in a broad range of conifer and coniferous hardwood types, including Pacific Ponderosa, Jeffrey and lodgepole pine, mixed conifer, firs, and pinyon-juniper with relatively dense canopies. May also forage in meadow edges and open sagebrush. Nesting and	May occur. Species is present in the Study Area, but is not located in the portions of the Study Area with mature and old-growth forest present.

ion Plan Area | October 2023

ential to Occur³

d. Suitable habitat is
his species in the Study
er, this species is only
cur in the Panamint, Inyo
ountains east and south
Area.

suitable habitat for this
esent throughout the

suitable habitat for this
esent throughout the
with suitable habitat
e higher elevation
ne Study Area where
dense forests are

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		fledgling period: March 1 – August 15 (Woodbridge and Hargis 2006).	
<i>Aquila chrysaetos</i> Golden eagle	--/--/FP/BLM	Typically occurs in rolling foothills, mountain areas, deserts and other open habitats up to 3,822 meters elevation. Typically nests on cliff ledges or large trees in open areas in canyons. Will occasionally use other tall structures for nesting, such as electrical transmission towers. Prey consists mostly of rodents, carrion, birds, reptiles and occasionally small livestock (Zeiner et al. 1990).	May occur. S species is pre Study Area.
<i>Athene cunicularia</i> Burrowing owl	--/--/SSC/BLM	Forages in grasslands, agricultural fields, and disturbed places where burrowing mammals are abundant with low and sparse vegetation. Nests in burrows, especially those of California ground squirrel (<i>Otospermophilus beecheyi</i>) but will use other refuge sites (Shuford and Gardali 2008). In the Central Valley of California, most foraging occurs within a 600-m radius of the nest (Gervais et al. 2003).	May occur. S species is pre Study Area.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST/--/BLM	Forages in grasslands, suitable grain or alfalfa fields, or livestock pastures adjacent to nesting habitat. Nests on large trees in open riparian habitat, scattered trees or small groves of trees in open areas (CDFW 1994).	May occur. S species is pre Study Area, v located in the portions of th
<i>Centrocercus urophasianus</i> Greater sage-grouse	--/SC/SSC/BLM, USFS	This species is found in sagebrush, perennial grassland, wet meadow, bitterbrush and alkali desert habitats in northeastern California from the Oregon border to Inyo County. Found in sagebrush during winter and spring, and meadows in summer (Zeiner et al. 1990).	May occur. S species is pre Study Area, v located in the portions of th
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FT/SE/--/BLM, USFS	Occurs at isolated sites in Sacramento Valley in northern California, and along Kern and Colorado River systems in southern California. Frequents valley foothill and desert riparian	May occur. S for this speci occur nesting

ion Plan Area | October 2023

ential to Occur³

suitable habitat for this
esent throughout the

suitable habitat for this
esent throughout the

suitable habitat for this
esent throughout the
with suitable habitat
e lower elevation
ne Study Area.

suitable habitat for this
esent throughout the
with suitable habitat
e lower elevation
ne Study Area.

suitable habitat is present
es and this species could
g along drainages with

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		habitats. Inhabits open woodlands with clearings, and riparian habitats with dense understory foliage along slow-moving drainages, backwaters, or seeps. Prefers dense willows for roosting but will use adjacent orchard in the Sacramento Valley. Typically requires expansive riparian habitat for nesting (Zeiner et al. 1990).	riparian habi River or Pine
<i>Empidonax traillii</i> willow flycatcher	--/SE/--/USFS	Nests in expansive montane riparian or wet meadows in shrubs, typically willows up to 10 feet high. Forages in willow thickets or in adjacent meadows (Zeiner et al. 1990). Typically found nesting between 600 – 2,500 m amsl (Zeiner et al. 1990).	May occur. S for this speci occur nesting riparian habi
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE/SE/--	Nests in dense riparian habitats in southwestern North America. Forages within and above the riparian canopy, along the patch edge, in openings within the territory, above water, and glean from tall trees and herbaceous ground cover (USFWS 2002). Typically found below 8,500 feet above msl.	May occur. S for this speci occur nesting riparian habi
<i>Falco mexicanus</i> Prairie falcon	--/--/WL	An uncommon permanent resident of the deserts, Central Valley, inner Coast Ranges, and Sierra Nevada in California. Primarily found in grasslands, rangelands, desert scrub, and some agricultural areas. Requires sheltered cliffs and ledges for cover. Dives from a perch or from flight to take prey on the ground (Zeiner et al. 1990).	May occur. S species is pre Study Area, w located along rocky habitat
<i>Haliaeetus leucocephalus</i> Bald eagle	--/SE/FP/BLM, USFS	Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small mammals, and water-fowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large	May occur. S species is pre with suitable one mile of la

ion Plan Area | October 2023

ential to Occur³

at, such as the Owens
Creek.

uitable habitat is present
es and this species could
g along drainages with
tat.

uitable habitat is present
es and this species could
g along drainages with
tat.

uitable habitat for this
esent throughout the
with nesting habitat
g cliffs and other steep
c.

uitable habitat for this
esent in the Study Area,
habitat located within
arge bodies of water.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		trees with a commanding view of the area (Zeiner et al. 1990).	
<i>Riparia riparia</i> Bank swallow	--/ST/--/BLM	Found primarily in riparian and lowland habitat in California. Nests in colonies along cliffs or steep riverbanks in holes. In California, a majority of the population is situated along the Sacramento River and the Feather River. Other smaller populations persist near Monterey and north of Shasta counties (Zeiner et al. 1990).	May occur. Species is present where steep slopes and cliffs are present.
<i>Strix nebulosa</i> Great gray owl	--/SE/--/USFS	Lives in mixed conifer or red fir forest in or on the edge of meadows. Requires large diameter snags (greater than 60 cm in diameter) in a forest with a high canopy closure which provide a cool sub-canopy microclimate. Snags include conifers and oaks (Wu et al. 2015). They typically use larger quality meadow habitat areas of at least 25 acres (Beck and Winter 2000) and select territories by the abundance of prey. Nests tend to be within 250 m of quality meadow habitat at higher elevations (above 1,800 m amsl). At lower elevations, it was documented that nearly a third of nests were greater than 750 m from meadows (at elevations from 700 m – 1,500 m), and likely not associated with meadows (Wu et al. 2015).	Will not occur outside of the study area. Species, which is present with the western slope, is not present at higher elevations.
<i>Strix occidentalis occidentalis</i> California spotted owl	FPT/--/SSC/FSS, BLMS	Lives in old-growth coniferous forests and rocky canyons. Prefers late seral-stage forests with large, old trees, multiple canopy layers, and downed woody debris. In the Sierra Nevada it uses Sierran mixed conifer forests at mid-elevations (Shuford and Gardali 2008). At lower elevations it inhabits ponderosa pine forests and blue oak-gray pine woodlands and valley foothill riparian forests (Shuford and	Will not occur outside of the study area. Species, which is present with the western slope, is not present at higher elevations.

ion Plan Area | October 2023

ential to Occur³

suitable habitat for this
esent in the Study Area,
slopes with friable soils

er. The Study Area is
e known range of this
h is typically associated
tern Sierra Nevada or
ion habitats.

er. The Study Area is
e known range of this
h is typically associated
tern Sierra Nevada or
ion habitats.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		Gardali 2008). At higher elevations, this species occupies red fir forests at high elevations (Shuford and Gardali 2008). Nests in tree cavities, broken-topped trees, and platforms, such as old raptor or squirrel nests. Does not build own nest (Zeiner et al. 1990).	
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE/SE/	Is an obligate riparian species during the breeding season that prefers early successional habitat (USFWS 1998). Typically found in structurally diverse habitat such as cottonwood-willow forests, oak woodlands, and mule fat scrub (USFWS 1998) that generally contains both canopy and shrub layers and includes some associated upland habitat. This species will winter in arroyos that contain mesquite scrub habitat and are not limited to willow dominated habitats. Previously considered to be limited to southern California, recent account of this species with successful breeding in Salinas Valley and in Yolo County show that this species is expanding back into its former range (CDFW 2023).	Will not occur outside of the species, which to be southe
Mammals			
<i>Antrozous pallidus</i> pallid bat	--/--/SSC/BLM	Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet (Bolster, ed. 1998). This species is very sensitive to disturbance of roosting sites. Common roost sites are rock crevices, old buildings, bridges caves, mines, and hollow trees (Bolster, ed. 1998).	May occur. S species is pre primarily in r abundant.
<i>Brachylagus idahoensis</i> Pygmy rabbit	--/--/--/BLM, USFS	This species is found in sagebrush, bitterbrush and pinyon-juniper woodlands in the Great	Not expected present for t

ion Plan Area | October 2023

ential to Occur³

r. The Study Area is
e known range of this
h is typically considered
rn California.

suitable habitat for this
esent in the Study Area,
ocky outcrops, which are

d. Suitable habitat is
his species, however the

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		Basin of Modoc, Lassen and Mono counties (Zeiner et al. 1990).	Study Area is species range the Study Area unlikely to occur
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/--/SSC/BLM	Widely distributed throughout California except alpine and subalpine habitats. This species eats moths, beetle and other insects which it catches on the wing or by gleaning from vegetation. Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, buildings and human made structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one visit (Zeiner et al. 1990).	May occur. S species is pre primarily in a tunnels are p
<i>Euderma maculatum</i> Spotted bat	--/--/SSC/BLM	Occurs in deserts, grasslands and mixed coniferous forests up to 10,000 feet. Forages over water or close to the ground primarily on moths. Prefers to roost in rocky cliffs with crevices but may also use caves or buildings. This species also forages and roosts individually but may on occasion roost in groups. Spotted bat is considered to be one of the rarest mammals in North America (Zeiner et al. 1990).	May occur. S species is pre primarily in a with crevices
<i>Gulo gulo</i> California wolverine	FPT/ST/FP/USFS	Found in alpine, subalpine and riparian habitats in remote areas with low levels of human use. In the Sierra Nevada may also use red fir, mixed conifer and lodgepole forests, typically above 1,311 m amsl in areas that typically support deep snow through May in most years (Spencer and Rustigian-Romsos 2012). Dens in caves, cliffs, log hollows and/or burrows (Zeiner et al. 1990). Considered to be	Not expected present along the Study Area areas. This sp in California known to rep However, inc dispersing th

ion Plan Area | October 2023

ential to Occur³

on the edge of this
e, which occurs north of
ea and this species is
occur in the Study Area.

Suitable habitat for this
esent in the Study Area,
areas where caves or
resent.

Suitable habitat for this
esent in the Study Area,
areas where rocky cliffs
are present.

d. Suitable habitat is
g the western extent of
ea in high elevations
pecies is extremely rare
and is currently not
produce in California.
ividuals could occur
rough the Study Area.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		extirpated from California (Moriarity et al. 2009). Recent wolverine detections were determined to be dispersers from Idaho (Moriarity et al. 2009).	
<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit	--/--/SSC	An uncommon to rare year-round resident of the crest and upper eastern slope of the Sierra Nevada, primarily from the Oregon border south to Tulare and Inyo counties. Preferred habitats include sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland. Found in open areas with scattered shrubs and exposed flat-topped ridges above 2600 meters. Open meadows and flat-topped hills with open stands of trees, some brush, and herbaceous understory are preferred for summer feeding. Young or stunted conifers, or shrubs, are required for day-time cover. Winters are spent in areas with sagebrush, or in thickets of young trees (Zeiner et al. 1990).	May occur. S species is pre Study Area.
<i>Martes caurina</i> Pacific marten	--/--/--/USFS	Coniferous and mixed conifer forests with more than 40% canopy closure typically from 1,350 – 3,200 m amsl (Zielinski 2014). Requires old growth forests that consist primarily of fir and lodgepole pines with cavities for nesting and denning (Zielinski 2014). Will also den under logs in the snow and form snow tunnels. Active year round, and typically avoids open areas with no canopy cover, but will forage in meadows, riparian areas and along streams (Zielinski 2014). Capable of traveling up to 15 miles in a single night while foraging (Zeiner et al. 1990). When traveling, marten typically moves along ridgetops.	Not expected present along the Study Area areas where forests are p unlikely to re Area. However occur dispers Area especia

ion Plan Area | October 2023

ential to Occur³

Suitable habitat for this
present throughout the

d. Suitable habitat is
g the western extent of
ea in high elevations
dense and mature
present. This species is
produce in the Study
er, individuals could
sing through the Study
lly in riparian areas.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
<i>Microtus californicus vallicola</i> Owens Valley vole	--/--/SSC/BLM	Found in mesic alkali meadows adjacent to aquatic habitats in the Owens Valley from 1,130 – 6,000 feet above msl (USFWS 1998). Requires friable soil for burrowing and forages on grasses, sedges, and herbs (USFWS 1998).	May occur. S species is pre Study Area.
<i>Myotis ciliolabrum</i> Small-footed myotis	--/--/--/BLM	Occurs throughout California up to 8,900 feet, in primarily arid and brushy to open forested habitat near water (Zeiner et al. 1990). This species is typically found humid roosting sites in buildings, caves, mines, under bark, snags and crevices. This species forages close to water since it has a poor urine concentrating ability. This species is often seen drinking water soon after it emerges from its roost (Zeiner et al. 1990).	May occur. S species is pre Study Area, e
<i>Myotis evotis</i> Long-eared myotis	--/--/--/BLM	Occurs throughout California up to 9,350 feet, although it is uncommon throughout its range. Habitats include all shrubland type habitats, woodland and forests with a preference for coniferous forests (Zeiner et al. 1990). This species is typically found roosting in buildings, under bark, snags and crevices. Caves may be used for night roosts. This species tends to roost in small groups (Zeiner et al. 1990). This species forages close to water since it has a poor urine concentrating ability. This species is often seen foraging along edge habitats (Zeiner et al. 1990).	May occur. S species is pre Study Area, e
<i>Myotis thysanodes</i> Fringed myotis	--/--/--/BLM, USFS	Occurs throughout California up to 9,350 feet, although it is most common between 4,000 to 7,000 feet. Habitats include pinyon-juniper, foothill hardwood and hardwood-conifer forests. This species is typically found roosting in buildings, mines, caves or crevices. Separate day and night roosts may be used (Zeiner et al.	May occur. S species is pre Study Area, e

ion Plan Area | October 2023

ential to Occur³

uitable habitat for this
esent throughout the

uitable habitat for this
esent throughout the
especially near water.

uitable habitat for this
esent throughout the
especially near water.

uitable habitat for this
esent throughout the
especially near water.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Pot
		1990). This species forages close to water since it has a poor urine concentrating ability. This species is often seen gleaning prey off of foliage (Zeiner et al. 1990).	
<i>Myotis yumanensis</i> Yuma myotis	--/--/--/BLM	Occurs throughout California up to 11,000 feet, although it is rare above 8,000 feet. Habitats include open forests and woodlands with a water source nearby, which this species typically forages over. This species is typically found roosting in buildings, mines, caves or crevices. Roosting habitat also includes abandoned swallow nests, and under bridges (Zeiner et al. 1990). This species forages close to water since it has a poor urine concentrating ability. This species is often seen drinking on the wing (Zeiner et al. 1990).	May occur. S species is pre Study Area, e
<i>Ovis canadensis nelsoni</i> desert bighorn sheep	--/--/FP/BLM, USFS	This species occurs in the Peninsular Ranges of Southern California from the San Jacinto and Santa Rosa Mountains south to Mexico.	Will not occur outside of the species.
<i>Ovis canadensis sierrae</i> Sierra Nevada bighorn sheep	FE/SE/--/BLM	The species uses rocky, steep terrain for escape and bedding, remains near rugged terrain while feeding in open habitat. Found in a variety of open habitats, including rocky barrens, meadows, and low, sparse brushlands (Zeiner et al. 1990).	May occur. S in the Study species occur the Study Area habitats. Crit the western Area in high
<i>Pekania pennanti</i> Fisher (Southern Sierra Nevada DPS)	FE/ST/SSC/USFS, BLM	Occupy late-successional conifer and mixed conifer-hardwood forests with an abundance of downed wood, snags, large trees, and a dense canopy (Zielinski 2014). Typically found at elevations from 1,070 – 2,135 m amsl, where persistent snow does not accumulate and impede movement (Zielinski 2014). Riparian forests and habitat close to open water such as streams are important. Cavities	Not expected present along the Study Area areas where forests are p unlikely to re Area. However occur dispers Area especia

ion Plan Area | October 2023

ential to Occur³

suitable habitat for this
 present throughout the
 especially near water.

r. The Study Area is
 e known range of this

suitable habitat is present
 Area for this species. This
 rs further to the west in
 ea in high elevation
 ical habitat is present in
 boundaries of the Study
 elevation habitats.

d. Suitable habitat is
 g the western extent of
 ea in high elevations
 dense and mature
 present. This species is
 reproduce in the Study
 er, individuals could
 sing through the Study
 lly in riparian areas.

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

Scientific Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential
		and branches in trees, snags, stumps, rock piles, and downed timber are used as resting sites, and large diameter live, or dead trees are selected for natal and maternal dens (Zielinski 2014). There is a significant gap in the range of fisher between the southern Sierra Nevada population and the northern Sierra Nevada/southern Cascade population that stretches approximately 400 km wide (Zielinski 2014).	
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	FE/ST/--	Habitat consists of subalpine habitat characterized by a mosaic of high-elevation meadows, rocky areas, scrub vegetation, and woodlands. Has been documented migrating down to high elevation forested habitats below subalpine zones in the Sierra Nevada from 6,000 to 9,000 feet elevation in the Cascades (USFWS 2018). Opportunistic predator of rodents and lagomorphs and also eats seeds such as pine nuts. Currently in California, this species is limited to a small population near Sonora Pass and another near Mt. Lassen (USFWS 2018). These populations include hybrids.	Not expected present along the Study Area areas. This sp in California reproduce in However, inc dispersing th
<i>Xerospermophilus mohavensis</i> Mohave ground squirrel	--/ST/--/BLM	Found in areas of dry, sparsely vegetated, loamy soils in the Mojave Desert. Uses burrows at the base of shrubs for cover. Aestivates from summer through spring (Zeiner et al. 1990).	Will not occur outside of th

¹ Sensitive species reported in CNDDDB or CNPS on the "Rio Linda" USGS quads, or in USFWS lists for the project site.

² Status is as follows: Federal (ESA) listing/State (CESA) listing/other CDFW status or CRPR. F = Federal; S = State of California; E = Endangered; T = Threatened; FP=Fully Protected; R=Rare; SSC=Species of Special Concern; WL=Watch List; BLM=Bureau of Land Management Sensitive (Bishop); USFS= US Forest Service (Inyo).

³ Status in the Project site is assessed as follows. **Will Not Occur:** Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot establish and/or habitat suitable for its establishment and survival does not occur on the project site; **Not Expected:** Species moves freely and might disperse on the project site, but suitable habitat for residence or breeding does not occur on the project site, potential for an individual of the species to disperse

ion Plan Area | October 2023

ential to Occur³

d. Suitable habitat is
g the western extent of
ea in high elevations
pecies is extremely rare
and is unlikely to
the Study Area.
ividuals could occur
rough the Study Area.

r. The Study Area is
is species known range.

Threatened; C = Candidate;
ester's Sensitive Species

not disperse on its own
rse through or across the
through or forage in the site

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the project site; however, focus surveys for the current project were negative; **May Occur:** Species was not observed on the site and breeding habitat is not present but the species has the potential for dispersal, **High:** Habitat suitable for residence and breeding occurs on the project site and the species has been recorded recently on or near the project site; **Observed:** Species was observed during surveys for the current project; **Present:** The species was observed during biological surveys for the current project and is assumed to occur or utilize the project site during some portion of its life cycle.

CRPR = California Rare Plant Rank: 1B – rare, threatened, or endangered in California and elsewhere; 2B – rare, threatened, or endangered in California and elsewhere. Extension codes: .1 – seriously endangered; .2 – moderately endangered.

ion Plan Area | October 2023

used surveys conducted for
potential to utilize the site for
project site, but was not
ed to occupy the project site

nia but more common

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreat

ion Plan Area | October 2023

Attachment C: Potential for Special-Status Species to Occur in the Study Area for the Buttermilk Recreation

This page intentionally left blank.

on Plan Area | October 2023

REFERENCES

- Beck, T.W. and J. Winter. 2000. Survey Protocol for the Great Gray Owl in the Sierra Nevada. USDA Forest Service; Pacific Southwest Region. Vallejo, CA.
- Bolster, B.C., editor. 1998. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No. FG3146WM.
- California Department of Fish and Wildlife (CDFW). 2023. California Department of Fish and Wildlife, Natural Diversity Database Biogeographic Data Branch. Sacramento, California. Last accessed online October 19, 2023.
1994. Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. November 8, 1994.
- California Native Plant Society, Rare Plant Program (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition, 9.5). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed October 19, 2023].
- Gervais, J. A., Rosenberg, D. K., and Anthony, R. G. 2003. Space use and pesticide exposure risk of male Burrowing Owls in an agricultural landscape. *J. Wildl. Mgmt.* 67:156–165.
- Jennings, M.R., and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California.
- Jepson Flora Project (eds.) 2023, Jepson eFlora, <https://ucjeps.berkeley.edu/eflora/>, accessed on October 15, 2023.
- Moriarty, K.M., W.J. Zielinski, A.G. Gonzales, T.E. Dawson, K.M. Boatner, C.A. Wilson, F.V. Schlexer, K.L. Pilgrim, J.P. Copeland, and M.K. Schwartz. 2009. Wolverine confirmation in California after nearly a century: native or long distance migrant? *Northwest Science* 83: 154-162.
- Moyle, P.B., R.M. Yoshiyama, J.E. Williams, and E.D. Wikramanayake. 1995. Fish species of special concern of California. 2nd edition. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA 272p.
- Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. Fish Species of Special Concern in California. Sacramento: California Department of Fish and Wildlife. www.wildlife.ca.gov.
- Nial KR, Drizd L and Voorhies KJ (2019) Butterflies Across the Globe: A Synthesis of the Current Status and Characteristics of Monarch (*Danaus plexippus*) Populations Worldwide. *Front. Ecol. Evol.* 7:362. doi: 10.3389/fevo.2019.00362.
- Shuford, W.D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. *Studies of Western Birds* 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

- Stebbins, Robert C. A Field Guide to Western Reptiles and Amphibians. 3rd Edition. Houghton Mifflin Company, 2003.
- U.S. Fish and Wildlife Service (USFWS). 2021. Species status assessment report for *Speyeria nokomis nokomis*. Grand Junction, Colorado.
2020. Monarch (*Danaus plexippus*) Species Status Assessment Report. V2.1 96 pp + appendices.
2018. Species Status Assessment Report for the Sierra Nevada Distinct Population Segment of the Sierra Nevada Red Fox. US Fish and Wildlife Service Region 8 Sacramento, CA.
2016. 50 CFR Part 17 RIN–1018–AY07 Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Sierra Nevada Yellow-legged frog, the Northern DPS of the Mountain Yellow-legged Frog, and the Yosemite Toad; Final Rule. Federal Register Vol. 81, No. 166. August 26.
2016. 50 CFR Part 17 RIN–1018–AY07 Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Sierra Nevada Yellow-legged frog, the Northern DPS of the Mountain Yellow-legged Frog, and the Yosemite Toad; Final Rule. Federal Register Vol. 81, No. 166. August 26.
2014. Endangered and Threatened Wildlife and Plants; Endangered Species Status for Sierra Nevada Yellow-Legged Frog and Northern Distinct Population Segment of the Mountain Yellow-Legged Frog, and Threatened Species Status for Yosemite Toad. Federal Register Vol. 79, No. 89, April 29, 2014.
2012. Mountain yellow-legged frog (*Rana muscosa*) Southern California Distinct Population Segment 5-year Review: Summary and Evaluation. Available online at: https://www.fws.gov/carlsbad/SpeciesStatusList/5YR/20120713_5YR_MYLF.pdf.
- 2009a. Owens Pupfish (*Cyprinodon radiosus*) 5-Year Review: Summary and Evaluation. Prepared by the Ventura Fish and Wildlife Office.
- 2009b. Owens Tui Chub 5-Year Review: Summary and Evaluation. Ventura, California. Ventura Fish and Wildlife Office.
2004. Revised Recovery Plan for the Paiute cutthroat trout (*Oncorhynchus clarkii seleniris*). Portland, Oregon. ix + 105 pp.
2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. I-ix + 210 pp., Appendices A-O.
1998. Draft Recovery Plan for the least Bell's vireo. U.S. Fish and Wildlife Service, Portland, OR.
1998. Owens Basin Wetland and Aquatic Species Recovery Plan, Inyo and Mono Counties, California. Portland, Oregon.
- Woodbridge, B. and Hargis, C.D. 2006. Northern goshawk inventory and monitoring technical guide. Gen. Tech. Rep. WO-71. Washington, DC: U.S. Department of Agriculture, Forest Service. 80p.

Wu, J.X., Siegel, R.B., Loffland, H.L., Tingley, M.W., Stock, S.L., Roberts, K.N., Keane, J.J., Medley, J.R., Bridgman, R., and C. Stermer. 2015. Diversity of Great Gray Owl Nest Sites and Nesting Habitats in California. *Journal of Wildlife Management* 79(6): 937–947.

Zielinski, W. J. 2014. The forest carnivores: marten and fisher. General Technical Report: PSW-GTR-247. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.

This page intentionally left blank.

Attachment D

Representative
Photographs



Photo 1. View of sagebrush habitat along Pine Creek Road. August 10, 2023.



Photo 2. View of riparian habitat along Pine Creek. August 10, 2023.



Photo 3. View of Monarch butterfly (red circle) at a patch of narrow-leaf milkweed along Pine Creek Road. August 10, 2023.



Photo 4. View of sagebrush habitat looking west from Buttermilk Road. August 11, 2023.



Photo 5. View of sagebrush habitat and riparian habitat along McGee Creek near Buttermilk Road. August 11, 2023.



Photo 6. View of sagebrush habitat and rock outcrops along Buttermilk Road. August 11, 2023.



Photo 7. View of desert scrub habitat along Chalk Bluff Road. August 11, 2023.



Photo 8. View of riparian habitat along the Owens River and Chalk Bluff Road. August 11, 2023.

A blue-tinted landscape photograph of a desert. In the foreground, there are large, smooth boulders on a sandy and rocky ground with sparse, low-lying vegetation. In the background, there are rolling hills and mountains under a sky with scattered white clouds. The entire image has a uniform blue color cast.

Appendix D: Tribal Engagement

Tribal Engagement

The Eastern Sierra region is the homeland of many Native American tribes who maintain a profound connection to the land. Including the perspective and insights of Tribal community members is important for informing respectful management of their ancestral homelands. The BIRPI project sought to include Tribal community members to document their unique perspectives and insights to shape recommended implementation activities.

The project team contacted Eastern Sierra tribes via email directed to the Tribal Chairperson or the Tribal Historic Preservation Officer (THPO), as available. The team was directed to focus engagement with the Bishop Paiute Tribe and met with the Bishop Paiute Tribe's on several occasions, including an initial project overview and input meeting held prior to any other public engagement, site visits, and extended public comment periods for tribal members. The team met with the Bishop Paiute THPO on June 12, 2023 as the first public engagement meeting for the project, with a follow-up site visit on June 13, 2023. Additional meetings and site visits occurred on November 2, 2023 and December 5, 2023 to allow for Tribal members to have dedicated space in addition to public meetings to provide information

and feedback on the plan. The team also extended the public comment period for Tribal members until December 20, 2023, to allow as much opportunity as feasible to gain Tribal input.

The project team is grateful to the Bishop Paiute THPO and other community members for their engagement with this process and the valuable testimonies provided on their traditions, connection to the landscape, and importance of cultural resource preservation in the project area.

The project team heard the following concerns and comments during the conversations held with the Bishop Paiute THPO, Tribal staff and community members:

- Tribes would like to continue to be engaged with land management decisions in the project area.
 - The Buttermilk area should be considered a cultural landscape in addition to the documented cultural resources.
 - Land managers and recreationalists should consider decisions on 100 year and 500 year timelines. The goal of management should be to keep the project area as pristine as possible for future generations.
 - Day-use permitting should include a cultural resource education.
 - Educational materials should include traditional teachings to protect the land, wildlife, and vegetation.
- Tribal monitors should be invited for ground disturbing activities in the project area as there are many undocumented cultural resources through the Buttermilk.
 - The Tribe supports establishing a tribal climbing ranger to augment the existing climbing ranger program.
 - Tribes need to be included within the planning process.

Comments received from the Bishop Paiute THPO reflecting conversations with Tribal Elders are listed below.

- There is big concern for this area and its sensitivity for cultural sites.
- The area needs more monitoring and Tribal involvement.
- There should be seasonal access for traditional practices without being disturbed by looky-loos. We are not zoo animals.
- I would like to see certain times of the year perhaps seasonally that the area is closed so we can keep practicing our Traditional ways without being disturbed.
- The area should have permanent permitting so we can hold those accountable who disrespect Our Land.
- Visitors need to be better Stewards and stick to pre-existing roads and trails.
- The Buttermilk area was a great place for us to gather and hunt and fish but we can't do that anymore because of all the off-road vehicles and traffic from the climbers.
- The plants and animals never get a break. When do they get time off to rest without having to deal with more and more recreation.
- No paved roads or more parking lots. Enough has been disturbed.
- The dispersed camping in the area is affecting our traditional gathering areas.
- Climbing should be done by reservation.
- There needs to be more accountability for the negative disturbances in the area.

