MONO CRATERS RESTORATION PROPOSED ACTION

This document outlines management actions that are proposed to meet the purpose and need for this project. The 1988 *Inyo Land and Resource Management Plan* (LRMP), the 1990 *Mono Basin National Forest Scenic Area Comprehensive Management Plan* (*Comprehensive Management Plan*), the *Mono Basin National Forest Scenic Area Final Environmental Impact Statement* (Scenic Area FEIS), and the 2004 *Sierra Nevada Forest Plan Amendment* (SNFPA) provide direction and describe the desired conditions for visual, vegetation, soil, hydrologic, air, wildlife, rangeland, and heritage resources. Management actions were identified and a proposed action was developed.

BACKGROUND

The Mono Craters are part of a chain of volcanic features on the Inyo National Forest that run north/south from Mono Lake to Mammoth Mountain in Mono County, California. The project area is located in the northern portion of the chain (see Map 1). It runs from Mono Lake in the north to June Lake Junction in the south. Its western boundary is U.S. Highway 395. The project area runs east to Mono Mills, with a portion of the southern end stretching out to Pilot Spring. The legal description of the project area is:

T1N, R26E, Sections 8, 9, 10, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27, 36 Mount Diablo Meridian (MDM)

T1N, R27E, Sections 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 MDM

T1S, R26E, Sections 1, 2, 3, 11, 12, 13, 14, 23, 24, 25, 26, 36 MDM

T1S, R27E, all sections, MDM

T1S, R28E, Sections 18, 19, 20, 2, 29, 30, 31, 32, 33 MDM

T2S, R27E, Sections 2, 3, 4, 5, 6, 7, 8 MDM

T2S, R28E, Section 4 MDM

The project area is a popular recreation spot for off-highway vehicle (OHV) users and many user-created trails have been established over the years. Many of these routes are not part of the National Forest's transportation system (NFTS).

Forest routes were addressed in the Record of Decision for the Inyo National Forest Motorized Travel Management Plan, which was issued in 2009. Forest wide, the plan designated over one thousand miles of previously unauthorized routes as part of the NFTS. If routes have not been designated for public use, motor vehicle use on those routes is prohibited. Under the 2009 decision, approximately 62 miles of unauthorized

routes in the project area were slated for closure. The decision authorized the Forest to place signage and barricades and to disguise unauthorized routes at intersections. Implementation began in 2010 and to date, most unauthorized routes in the Mono Craters area have been blockaded or otherwise closed. The 2009 Travel Management Decision addressed the need for providing a designated road system for motorized transportation, but it did not analyze specific actions for large scale restoration where adverse effects on natural resources have occurred due to motorized vehicle use.

PURPOSE AND NEED

The purpose of the Mono Craters Restoration Project is to evaluate, restore, and protect 62 miles of unauthorized routes that were not designated under the 2009 Inyo National Forest Travel Management Record of Decision (ROD) while still providing an effective designated system of legal roads and motorized trails.

1. ***There is a need to improve and maintain visual quality in the project area.***

   Unauthorized motorized vehicle routes have diminished visual quality in the Mono Craters area. Much of the project area lies within the Mono Basin National Forest Scenic Area (see Map 1), making visual quality a high priority. Forest Standards and Guidelines call for rehabilitation of areas where visual quality is affected (USFS, 1988, pp. 93-94). There are many areas where vehicle users have created unauthorized trails and visual quality objectives (VQOs) are not being met. Unauthorized routes can be seen from U.S. Highway 395, a scenic corridor. The *Mono Basin National Forest Scenic Area Comprehensive Management Plan* (*Comprehensive Management Plan*) directs managers to "rehabilitate the visual resource where existing visual condition fails to meet the assigned VQO (USFS, 1990b, p. 46)."

2. ***There is a need to restore and protect sensitive plant populations in the project area.***

   Sensitive plants are known to exist in the project area. The LRMP calls for development and implementation of "a consistent, systematic, biologically sound program for sensitive plant species and their habitat so that federal listing does not occur" (p. 91). Also, the Forest is to "complete inventories of project sites and areas of disturbance if there is potential habitat or known population locations are identified" (p. 91). The Forest is to "allow no new disturbance of identified sensitive plant habitat without direction from…an environmental analysis (p. 92)."

3. ***There is a need to maintain and improve watershed and soil conditions throughout the project area.***

   Restoration of unauthorized routes will prevent erosion and restore overland water flows to more natural patterns, which will speed the natural recovery of the closed/rehabbed routes. The LRMP calls for revegetation of roads when use is terminated (p. 97).

4. ***There is a need to make small changes to the NFTS in order to provide appropriate and legal access to important recreational opportunities and other destinations via a designated system of roads and motorized trails which minimize resource effects.***

   The ROD provided for a "clearly defined, designated system of roads and trails designed to best meet the recreational needs of the public (USFS, 2009b)." Authorized and unauthorized routes are also needed to provide access for other permitted activities such as grazing and mining. Certain routes which were not designated for motorized use in the project area may provide important recreational and administrative access, while limiting potential resource damage in the area. Conversely, some NFTS roads and trails may have been designated that do not provide recreational benefits, are unused or are duplicative, and may have effects on various resources.

EXISTING CONDITIONS

The majority of the unauthorized routes are located within terrain consisting of deep pumice soils and sharp obsidian and rhyolite rock, and contain sensitive cultural features, unique geologic features, and sensitive vegetation.

The project area vegetation is generally comprised of typical Eastside Sierra sagebrush/bitterbrush type communities, including: Indian ricegrass (*Achnatherum hymenoides*), needlegrass (*Achnatherum* spp.), sagebrush (*Artemesia tridentata*), and bitterbrush (*Purshia* spp.), along with Jeffery pine (*Pinus jeffreyi*). The sensitive plant *Lupinus duranii* is present within the project area.

Bedrock consists primarily of volcanic rocks including tuff, basalt, and andesitic and rhyolitic rocks. Surficial deposits are also mainly volcanically derived, including ash and pumice deposits. Most soils are weakly developed and have low productivity. Because most of the area contains sandy and ashy soils with very high permeability, most of the area is often dry and the soils have little potential for compaction.

Visual quality in the project area is impaired by the large number of unauthorized trails present. Although these routes have been closed, many of them are still highly visible. The environment in the project area cannot heal quickly, nor does it have a high visual absorption capability. The visual absorption capability is "the degree by which the landscape can absorb land disturbing activities usually by vegetative or topographic screening. The Scenic Area has a very low capability of visually absorbing (screening) land-disturbing activities. Screening vegetation is almost non-existent and the basin contains little topographic relief (USFS 1990a, p. 97)."

Where the unauthorized routes are visible they hold an attraction for drivers, making it likely that they will continue to be used. Some drivers will drive around barriers, crushing vegetation and otherwise causing resource damage to get onto what they perceive as an

inviting road. With continued use of these unauthorized routes, the land is unable to recover.

See the table in the "Proposed Action" section for existing conditions of specific routes.

DESIRED CONDITIONS

Desired conditions are the on-the-ground resource conditions that management is working toward within a defined timeframe. These are the expected results if management goals are fully achieved. They bring broad-scale desired conditions from the Forest Plan down to project level.

Visual Quality

Because visual quality is a priority, one aspect of the desired condition is that VQOs are met. Two VQOs apply in the Scenic Area: retention and partial retention. The *Comprehensive Management Plan* (p. 47) gives the following prescriptions for VQOs in the Scenic Area:

- Development Zone – Manage vegetation setting in and adjacent to the zone to meet the VQO of retention within the foreground zone.
- General Use Zone – Meet or exceed VQO of partial retention.
- Limited Use Zone – Meet the VQO of retention as seen from level I and II viewpoints[1].
- No Development Zone – Meet the VQO of retention. Upon abandonment of existing uses, rehabilitate all surface disturbances.

The definitions of "retention" and "partial retention" come from the Scenic Area FEIS and are as follows:

Retention: Must not be visually evident – retain natural appearance

Partial Retention: Must be visually subordinate to natural character of landscape

Visual resources are also important in the parts of the project area that do not fall within the Scenic Area boundaries. In the case of route closures, the VQO is that of retention—that is, the old route should blend in with its surroundings and not be visible.

Desired conditions for other resources are described in the LRMP:

The goal for sensitive plant species it that they "are protected to ensure they will not become threatened or endangered (USFS, 1988, p. 68)."

[1] "Level" refers to the Sensitivity Level, which is a measure of the significance of a viewpoint based on the frequency of its use, the purpose of its use, and its visual qualities. In the project area, U.S. Highways 395 and 120 East are Level 1 roads. Most of the Scenic Area is seen from Level 1 observation points (USFS, 1990a, p. 95).

The goal for soils and hydrology is that "National Forest management activities are conducted to maintain or improve soil productivity, to maintain favorable conditions of water flow, and to comply with water quality goals as specified in state and federal clean water legislation for the sustained benefit of consumptive and nonconsumptive users of water (USFS, 1988, p. 68)."

Desired condition for air quality is that air quality "complies with all applicable regulations. The conduct of Forest management activities is carried out in a manner consistent and compatible with the attainment of state and federal air quality objectives (USFS, 1988, p. 66)."

The Forest's goal for wildlife is that "wildlife habitat is managed to provide species diversity, to ensure that viable populations of existing native vertebrates and invertebrates are maintained, and that the habitats of management emphasis species are maintained or improved (USFS 1988, p. 69)."

The LRMP states that the goal for range resources is that "a sustained yield of forage is provided, range condition is improved, and grazing capacity is increased on suitable range, while other resource values are maintained or improved through cost-effective development and improved management (USFS, 1988, p. 67)."

For cultural resources, "identification, evaluation, protection, and interpretation of cultural and historic resources are continuous and an integral part of management of the Forest (USFS, 1988, p. 66)."

PROPOSED ACTION

The proposed action is to plan and implement a restoration project in the Mono Craters area, which would focus on evaluating and restoring portions of approximately 60 miles of routes that were not designated as part of the Travel Management ROD (2009), and are not authorized for motorized travel. Twelve routes would have restoration activities implemented. Restoration activities would include ripping, vertical mulching, improving barriers, and other activities as recommended by the Interdisciplinary Team. Specific actions are proposed to mitigate impact on natural and cultural resources.

Further, 13 routes or route segments (a total of 2.97 miles) that were previously unauthorized will be added to the National Forest's transportation system (NFTS). And additional five routes or route segments (a total of 1.6 miles) will be removed from the system. There is a need to make these small changes to the NFTS in order to provide appropriate and legal access to important recreational opportunities, other permitted activities such as grazing and mining, and other destinations via a designated system of roads and motorized trails which minimize resource effects. Monitoring since the 2009 Travel Management decision has shown that certain routes which were not designated for motorized use in the project area may provide important recreational and administrative

access, while limiting potential resource damage in the area. Those are proposed for addition to the system. Conversely, some NFTS roads and trails may have been designated that do not provide recreational benefits, are unused or are duplicative, and may have effects on various resources. Those are proposed for removal from the system.

Monitoring will be conducted, and as Travel Management is an ongoing process, changes in management may occur in the future. The Travel Management Rule "recognizes that designations of roads, trails, and areas for motor vehicle use are not permanent. Unforeseen environmental impacts, changes in public demand, route construction and monitoring conducted under §212.57 of the final rule may lead responsible officials to consider revising designations under §212.54 of the final rule" (36 CFR Part 212).

Specific actions are described in the table below:

Route	Map Key	Existing Condition/Need for Change	Proposed Action
01S122	Detail Map A	The portion of this route between its intersection with Route U-01S223 and its intersection with 01S127 is covered with cobble, is almost impassable, and not receiving use. This is a duplicate route to 01S233, which would be added to the system.	Remove this portion of the route from National Forest's Transportation System (NFTS). Block this portion of the route with barricades.
U-01S223	Detail Map A	Provides an alternative to Route 01S122, a segment of which would be closed under this proposed action. The existing road block has been vandalized and there has been OHV incursion. The tread is compacted and is incised/entrenched in landscape.	Add route to the NFTS.
01S138	Detail Map B	This authorized route is not used and is recovering on the northern end. It leads to Route 01S141A, which would be closed under this proposed action.	Remove route from the NFTS.
01S138A	Detail Map B	This authorized route is rarely used and was blocked on its west side. The western part of the route is closed, making the authorized segment a dead-end route.	Remove route from the NFTS.
01S141	Detail Map B	This segment of an authorized route connects Route 01S21 to 01S141A, which would be closed under this proposed action. Route 01S21 would	Close western segment of route.

Route	Map Key	Existing Condition/Need for Change	Proposed Action
		remain open. Drivers are using this route to access camping spots and are causing resource damage.	
01S141A	Detail Map B	Drivers are using this authorized route to access camping spots and are causing resource damage.	Remove route from the NFTS.
U-N10051	Detail Map B	The tread is compacted and route does not have vegetation growing in the wheel tracks. The tread is incised/entrenched in the landscape. This route is highly visible from Highway 120 and Mono Mills Interpretive Site.	Vertical mulching, ripping Block and disguise entrance at junction with Highway 120.
U-N165	Detail Map B	Because routes 01S141A, 01S138, and a segment of 01S141, would be closed for resource protection under this proposed action, Route U-N165 is needed to allow drivers to continue north onto Route 01S21C.	Add this route to the NFTS.
U-01N110	B2	The route is very visible from Picnic Grounds Road. The route does not have vegetation growing in the wheel tracks.	Vertical mulching
U-N272	B6	The barricade is not effective, route is still being used.	Reinforce barricade, disguise Vertical mulching
U-01S209	C6	This route has been heavily used in the past. There is no evidence of recent use, but the route is easily accessed. The tread is highly compacted and the route does not have vegetation growing in the wheel tracks. This route is visible from nearby routes.	Vertical mulching, ripping

Route	Map Key	Existing Condition/Need for Change	Proposed Action
		Lupinus duranii is present.	
U-N276	C6	Tread is highly compacted. This route does not have vegetation growing in the wheel tracks. Route is heavily used.	Add route to the NFTS.
U-01S323	C7	Tread is compacted and route does not have vegetation growing in the wheel tracks.	Vertical mulching for the first 150 feet
U-01S537E	C7	This unauthorized route is highly visible from a nearby and heavily used authorized route (01S35). Barricade on northern section of the route is blocking entrance to sheep bedding ground.	Vertical mulching on south ends of the road where it intersects with Route 01S35 Move barricade to give permittee access to bedding ground on the north end.
U-01S537W	C7	This unauthorized route is highly visible from a nearby and heavily used authorized route (01S35).	Vertical mulching on south ends of the road where it intersects with Route 01S35
U-N10085	C7	This is a primary route used by drivers in the summer months, and is on the winter Over Snow Vehicle (OSV) trail system.	Add route to the NFTS.
U-N2730	C7	This small spur goes to a camping spot used by climbers going to nearby boulders.	Add route to the NFTS.
U-N311	C7	This route provides access to Route U-N2730, a spur road where a popular campsite is located. Route U-N2730 would be added to the NFTS under this proposed action.	Add route to the NFTS south of Route U-N2730.
U-N310	C7	The tread is incised/entrenched in landscape. Tread is compacted. Route is being used as a bypass around a bad section of Route 01S37A.	Add route to the NFTS.

Route	Map Key	Existing Condition/Need for Change	Proposed Action
U-N325	C8	Tread is compacted. Portion of route north of Route 02S106 is a marked snowmobile route.	Add portion of this route north of Route 02S106 to the NFTS.
U-N434	C8	Tread is highly compacted and route does not have vegetation growing in the wheel tracks. This route is being heavily used by the public as a turnout from Highway 395. Another unauthorized route connects this route to an NFTS route. There is an electrical box present which will need to be used and maintained in the future. The box belongs to Verizon.	Native mulching Erect barricade, disguise Vertical mulching on the northeast section of the route. Leave the southwest portion open to maintain Verizon's access to the electrical box.
U-01N139	D3, D4, E4	The area is wide-open and sparsely vegetated, making blockage difficult. The east end of the route is highly visible from Highway 120. The tread is incised/entrenched in landscape. This route does not have vegetation growing in the wheel tracks. Lupinus duranii is present where the route parallels Highway 120.	Vertical mulching, rake out wheel tracks along the entire length of the route Add log barriers along south side of Highway 120.
Unauthorized play area between Routes 01N26 and 01S18	D4	Users have driven all over this area with no one single access point. Because the area is wide open and sparsely vegetated, there is no effective and feasible way to keep vehicles out of the area. Vehicles are accessing the tops of the craters by using the unauthorized section of Route 01S18.	Make a defined turn-around at the end of the routes to communicate to drivers that the road ends there. From the authorized end of Route 01S18, obliterate the first 150 feet of the unauthorized section.
U-02S252	D8	This unauthorized route is used in	Add route to the NFTS.

Route	Map Key	Existing Condition/Need for Change	Proposed Action
		place of the authorized route which has too steep a grade for most vehicles to get up.	
U-N328	D8	Tread is moderately compacted and route does not have vegetation growing in the wheel tracks. Route is blocked but OHV users are bypassing the blockade in order to reach a lookout.	Reinforce blockade, bring in boulders to block route. Vertical mulching
U-N147	E3	This route does not have vegetation growing in the wheel tracks. The tread is incised/entrenched in the landscape. This route is being used as a turn-around on a sandy, dead-end road.	Add route to the NFTS.
U-N148	E3	This road is the entrance to a well-established camp site/fire ring. Enforcing closure will be difficult. This route does not have vegetation growing in the wheel tracks.	Add route to the NFTS.
U-N151	E4	The tread is compacted and route does not have vegetation growing in the wheel tracks.	Erect barrier, native mulching, ripping and disguise
U-N153	E4	The tread is compacted and route does not have vegetation growing in the wheel tracks. This route is part of a turn-out from Highway 120.	Add route to the NFTS.
U-N482	E5, F5	This route leads to a water tank and trough.	Place barricade on far end of water tank and not directly on the main route to allow access by permittee.
U-N529	E6, E7	The tread is incised/entrenched in landscape. This route does not have vegetation	Vertical mulching

Route	Map Key	Existing Condition/Need for Change	Proposed Action
		growing in the wheel tracks.	
U-01S355	E6, E7	This route does not have vegetation growing in the wheel tracks. Tread is incised/entrenched in landscape. Users cut through barrier to access route. U.S. Pumice Mine needs this route to access a mining site.	Add route to the NFTS.
U-N192	F5	This route does not have vegetation growing in the wheel tracks.	Block entrance, native mulch, hand raking Rake at points of blockage, including a 30-meter buffer.
U-N579	H7	Route is not blocked and is still visible	Erect barricade, disguise Vertical mulching

TEXTS REFERENCED

36 CFR Parts 212, 251, 261, and 295 Travel Management; Designated routes and Areas for Motor Vehicle Use; Final Rule. Federal Register, Volume 70, No. 216 / Wed., Nov. 9, 2005 / Rules and Regulations.

USDA Forest Service. 1988. *Inyo Land and Resource Management Plan*. Inyo National Forest, Bishop, California.

USDA Forest Service. 1990a. *Mono Basin National Forest Scenic Area Final Environmental Impact Statement.* Inyo National Forest, Bishop, California.

USDA Forest Service. 1990b. *Mono Basin National Forest Scenic Area Comprehensive Management Plan*. Inyo National Forest, Bishop, California.

USDA Forest Service. 1995. *Forest Plan Amendment 6—Forest-Wide Range Utilization Standards.* Inyo National Forest, Bishop, California.

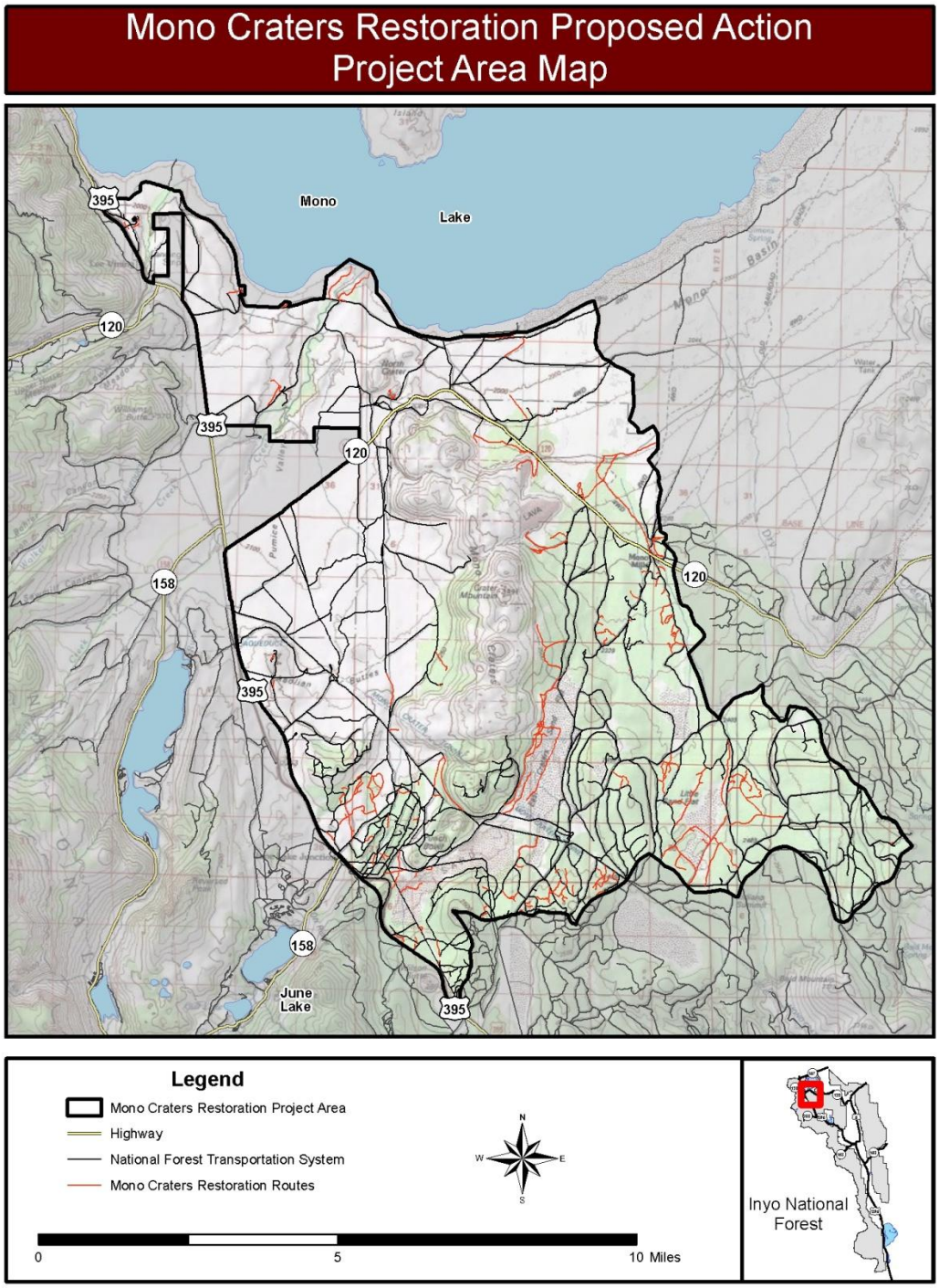
USDA Forest Service. 2004. *Sierra Nevada Forest Plan Amendment*. Pacific Southwest Region, Vallejo, California. R5-MB-04

USDA Forest Service. 2006. *Programmatic Agreement among the USDA Forest Service, Intermountain Region's Humboldt-Toiyabe National Forest, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Designating Motor Vehicle Routes and Managing Motorized Recreation on the National Forests in California.* Inyo National Forest, Bishop, California.

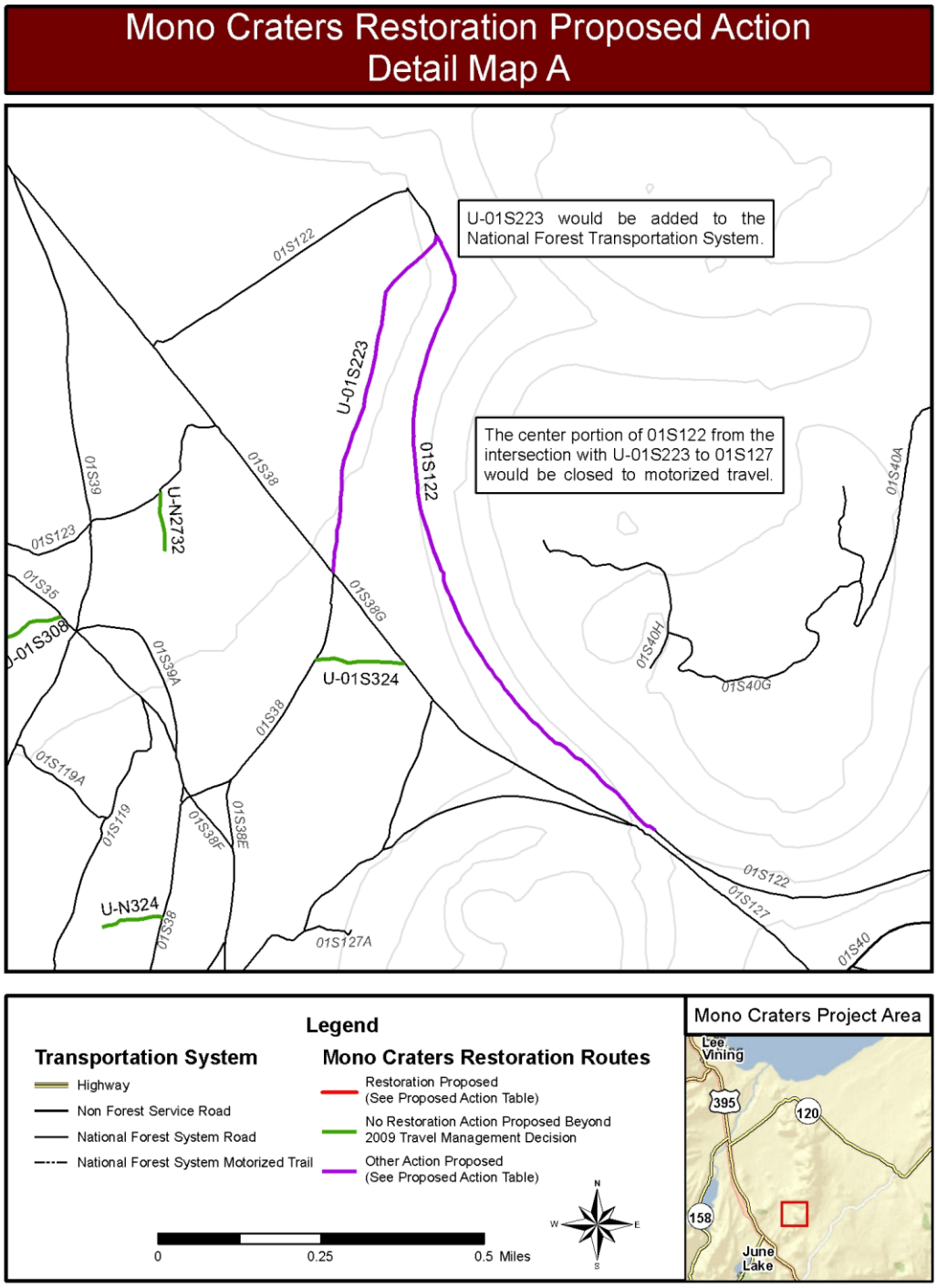
USDA Forest Service, 2009a. *Inyo National Forest Travel Management Final Environmental Impact Statement.* Inyo National Forest, Bishop, California.

USDA Forest Service, 2009b. *Inyo National Forest Travel Management Final Environmental Impact Statement Record of Decision*. Inyo National Forest, Bishop, California.

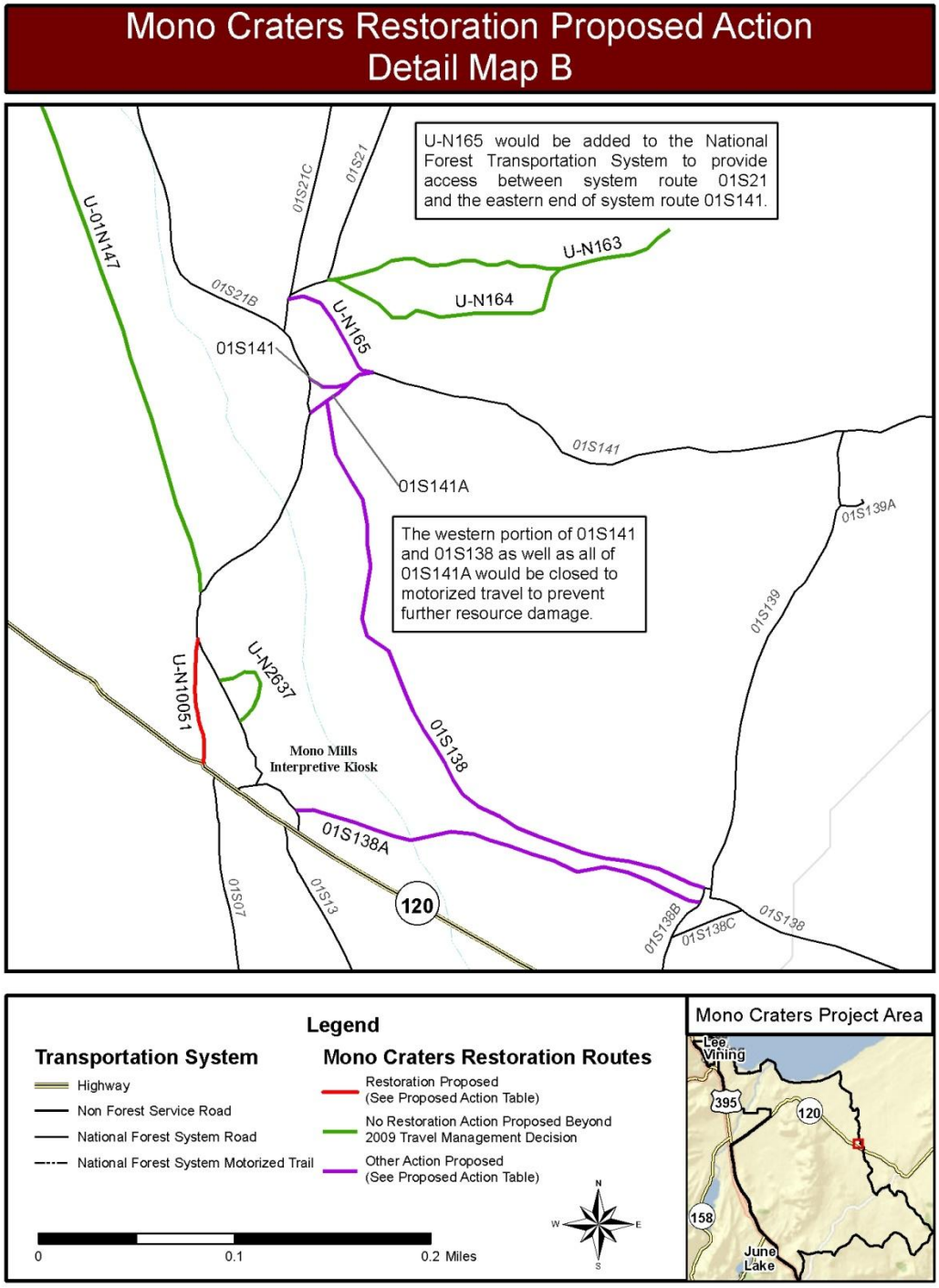
PROJECT AREA MAP



MAP A


Mono Craters Restoration Proposed Action
Detail Map A
U-01S223 would be added to the National Forest Transportation System.
The center portion of 01S122 from the intersection with U-01S223 to 01S127 would be closed to motorized travel.
01S122
U-01S223
01S122
01S38
01S39
U-N2732
01S123
01S35
U-01S308
01S39A
01S38G
U-01S324
01S38
01S119A
01S119
01S38F
01S38E
U-N324
01S38
01S127A
01S40H
01S40G
01S40A
01S122
01S127
01S40
Legend
Transportation System
Highway
Non Forest Service Road
National Forest System Road
National Forest System Motorized Trail
Mono Craters Restoration Routes
Restoration Proposed
(See Proposed Action Table)
No Restoration Action Proposed Beyond
2009 Travel Management Decision
Other Action Proposed
(See Proposed Action Table)
N
W
E
S
0
0.25
0.5 Miles
Mono Craters Project Area
Lee Vining
395
120
158
June Lake

MAP B


Mono Craters Restoration Proposed Action
Detail Map B
U-N165 would be added to the National Forest Transportation System to provide access between system route 01S21 and the eastern end of system route 01S141.
The western portion of 01S141 and 01S138 as well as all of 01S141A would be closed to motorized travel to prevent further resource damage.
U-01N147
01S21C
01S21
U-N163
U-N164
01S21B
U-N165
01S141
01S141A
01S141
01S139A
01S139
U-N10051
U-N2637
Mono Mills
Interpretive Kiosk
01S138
01S138A
120
01S07
01S13
01S138B
01S138C
01S138
Legend
Transportation System
Highway
Non Forest Service Road
National Forest System Road
National Forest System Motorized Trail
Mono Craters Restoration Routes
Restoration Proposed
(See Proposed Action Table)
No Restoration Action Proposed Beyond
2009 Travel Management Decision
Other Action Proposed
(See Proposed Action Table)
N
W
E
S
0
0.1
0.2 Miles
Mono Craters Project Area
Lee Vining
395
120
158
June Lake