Sequoia Prioritized Meadows Restoration Project

Upper Kern Fisheries Enhancement Fund

Trout Unlimited

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Application Form

General Information

Project Name*

Name of Project

Sequoia Prioritized Meadows Restoration Project

Funding Request

$50,000.00

Applicant Organization

Trout Unlimited

Project Location

Include Name and Street Address

10 meadows (project sites) across Sequoia National Forest. 105 Whitney Rd (PO Box 9) Kernville, CA

Project Objective

Brief Statement

This project's goal is to restore meadow ecosystem function and services across the Sequoia National Forest, specifically to designed to improve habitat/water quality and water availability for Kern River rainbow trout and California golden trout.

Name of Project Coordinator

Jessica Strickland

Phone Number of Project Coordinator

(xxx)xxx-xxxx

(830)515-9917

Email of Project Coordinator

jstrickland@tu.org

Mailing Address of Project Coordinator

PO Box 7399 Mammoth Lakes CA 93546

Project Details

Project Description

Please give a detailed description of the project.

Offered by a diverse and strong partnership including Trout Unlimited, the Sequoia National Forest, University of Nevada-Reno and environmental consultants, the overall goal of this project is to restore the ecosystem function and services provided by meadows across the Sequoia National Forest. We are particularly interested in improving habitat, water quality and late-season water availability at the landscape level for two of California's native endemic trout species, Kern River rainbow trout and California golden trout.

The Forest has identified 10 meadows across the forest landscape that are in critical need for repair. However, the Forest is limited in resources necessary to complete environmental compliance as to allow these projects to move into implementation phase. In addition to being identified as in need of repair, the 10 meadows were prioritized on two primary criteria (1) within endemic trout native range and (2) proximity to existing meadow restoration or aquatic organism passage projects (i.e., opportunity to create a matrix of hydrologically/biologically connected projects and restored sub-watersheds). There are two groups of meadows: (1) meadows within sub-watersheds and deemed important for Kern River rainbow trout recovery efforts (six total meadows), and (2) meadows within Fish Creek Critical Aquatic Refuge for California golden trout (four total meadows). The project sites fall within four sub-watersheds (South, Fay, Rattlesnake and Fish Creeks) and encompass over 500 total acres of meadows.

These will provide for project design, environmental compliance and permitting to move all 10 meadows into implementation so that overall forest and watershed resources are improved. The project is structured to proceed with four phases: I) identify meadows with immediate restoration and planning needs to bring to appropriate project readiness; II) complete technical restoration design and complete NEPA/CEQA compliance and permitting; III) implementation of restoration actions and management priorities; and IV) on-going monitoring and adaptive management. Primarily led by the Forest, the first phase of this project is complete (funded with Forest resources). With this proposal, we request funding from the Kern Community Foundation to complete Phase II and initiate part IV–pre-implementation monitoring- necessary to successfully evaluate the effectiveness of the restorations at meeting performance measures.

Statement of Justification

Please indicate the justification for this project, identified alternative solutions, and reasoning for this selection.

The 10 project sites are located in headwater tributaries to the Kern River and have been identified by the Forest Service as in degraded condition. Upon completion of all phases, this project is expected to reduce erosion and sedimentation delivery, increase ground water tables and water storage capacity and improve water quality/aquatic habitat through improved dissolved oxygen and reduced waters temperatures. This will be achieved through actions such as: streambank stabilization, channel headcut and gully repair, culvert replacement, movement of dispersed camping sites, and roads decommissioning. The no action alternative would result in the continued degradation of these project sites and downstream resources.

The project sites are all identified montane meadow habitats located in the Sierra Nevada across the Sequoia National Forest. Past meadow restoration projects have demonstrated that a restored meadow can result in a 30% increase in water storage capacity (Kavvas et al. 1994, Plumas Corporation 2006; Flint et al., 2004). Through restoration, these meadows will be reconnected to groundwater, which usually results in reduced water temperatures in summer (Loheid and Gohelic 2006). In addition, decreased temperature and increased hyporheic exchange with the floodplain should result in higher dissolved oxygen levels. Reconnecting the meadows with the floodplain will reduce erosion and sediment delivery (Kavvas et al. 1994). Preliminary studies suggest a 15% reduction in peak stage of floods is possible in meadows with restored connection between channel and floodplain. Restoration of these meadows will improve aquatic and terrestrial habitat for native species including endangered and threatened species that depend on meadow habitat. All project sites are within range for either Kern River rainbow trout or California golden trout. This will promote watershed health by improving water quality, quantity, and aquatic habitat available for Kern River rainbow trout and California golden trout.

This project has been deemed important at the State and Federal level. California Department of Fish and Wildlife recently awarded $486,183 in the 2015 round of Proposition 1 funds, covering approximately 85% of project costs. We are seeking the remainder of the project costs through this proposal. Additionally, the Sequoia National Forest has prioritized this project, and the Forest Supervisor has provided a letter of support (see attached).

Monitoring

Provide the monitoring description, schedule, and organization responsible.

All monitoring will be completed by Trout Unlimited, the University of Nevada-Reno and Sequoia National Forest in accordance with accepted State and Federal protocols.

Monitoring Plan Overview:

1. Baseline Conditions: Existing Aquatic habitat typing

Baseline aquatic habitat conditions, both seasonal and perennial, will be characterized using a combination of analysis of data from remote sensing and on the ground habitat surveys. This will help determine if restoration efforts improve habitat quality and habitat diversity. This will then be relateable to fish distribution and abundance.

Habitat characterization and surveying will occur prior to restoration groundbreaking, during the summer 2016 low flow period.

2. Baseline Conditions: Fish Species abundance and distribution

Fisheries population surveys will be conducted at all 10 project sites.

Meadow Restoration Pre-Post Implementation Monitoring

1. Groundwater restoration: Piezometer Readings from after the restoration will be compared to readings from the pre-restoration period. Piezometers will be installed at various places within all 10 meadows to monitor the water table prior to and following implementation.

2. Sediment/Erosion Reduction: engineers will inspect the structural integrity of the structures built every year for 5 years following implementation. Soil scientist will evaluate if seepage rates are high due to type of soils. Structure integrity surveys are designed to monitor the stability of the plugs and valley grade control structures.

3. Riparian Vegetation Enhancement: Photo points and transect surveys will capture the development of the riparian vegetation both natural recruitment and plantings.

4. Water Temperature Reduction: In stream temperature monitoring will start summer 2016 and continue for 10 years to document changes in temperature over the season and across the years in the restored meadow.

Post Implementation Monitoring and Schedule: Implementation of the Sequoia National Forest Prioritized Meadow Restoration Project will include 5 years of monitoring by Forest Service hydrologist and biologist. Six types of surveys will occur: Stream Condition Inventory (SCI) surveys, piezometer readings, structure integrity, photo points, botany transects, and fish/wildlife surveys. We will collect all pre-implementation comparative data in association with this grant.

Implementation Schedule

Please include a monthly schedule, start and completion dates, and time needed for licenses and permits. If preferable, you may upload a document or calendar.

ImplementationSchedule.pdf
See attachment.

Budget

Please provide itemization of costs, other funding, cost sharing, cost estimates to be valid for at least one year. If preferable, a document or spreadsheet can be uploaded.

FinalBudget.pdf
Itemized and summarized budget identifying cost share.

Additional Uploads

Additional Upload

Please include a brief description of uploaded document.

AttLOS_2015CDFWP1_1of1.pdf
Support letter from Sequoia National Forest Supervisor Kevin Elliott.

Additional Upload

Please include a brief description of uploaded document.

ProjectSitesMap.pdf
Project site map.

Fiscal Agent Information

Name of Fiscal Agent
Trout Unlimited

Fiscal Agent Tax ID Number
36-1612715

Fiscal Agent Mailing Address- Street
1777 N Kent St Suite 100

Fiscal Agent Mailing Address- City
Arlington

Fiscal Agent Mailing Address- State
VA

Fiscal Agent Mailing Address- ZIP
22209

Fiscal Agent Phone
8305159917

Fiscal Agent- Contact Person
Jessica Strickland

Fiscal Agent- Contact Email
jstrickland@tu.org

File Attachment Summary

Applicant File Uploads

- ImplementationSchedule.pdf
- FinalBudget.pdf
- AttLOS_2015CDFWP1_1of1.pdf
- ProjectSitesMap.pdf

Implementation Schedule

Task No.	Task Title	Deliverables and Key Project Milestones	Estimated Completion Dates
1.0	**Project Management, Administration and Reports**	▪ Invoices/reporting/contractor management	▪ Ongoing and as required (Project Start Date: May 1 2016, End Date: July 2017)
Task 2. Technical Restoration Design and CEQA/NEPA Compliance			
2.1	**Historic Photograph and Site Review**	▪ Memorandum describing project site history ▪ Georeferenced historical imagery	September 2016
2.2	**Jurisdictional Wetlands Delineation**	▪ Jurisdictional Wetlands Delineation Report ▪ GIS data files for the project site	January 2017
2.3	**Biological Assessment**	▪ Biological Assessment Report with GIS-based maps ▪ Vegetation and Rare Species Habitat Evaluation ▪ GIS data files for the project site	January 2017
2.4	**Archeological Assessment**	▪ Interpretive findings report in support of CEQA/NEPA preparation ▪ Identified cultural resources text for the Management Plan ▪ GIS map of areas of interest/importance	January 2017
2.5	**Geomorphic and Hydrologic Studies and Restoration Design**	Technical memorandum for use in the CEQA/NEPA documentation, and basis for restoration recommendations and design	January 2017
2.6	**Develop Concept Design**	Detailed concept design memorandum (which includes: drawings of the concept design including schematic plan, sections, and profiles; preliminary cost estimates; identified environmental impacts and permitting issues for each project site)	March 2017
2.7	**Develop Restoration Design Plan**	Restoration Design Plan (including: schematic level plan, sections, profile drawings and finalized project maps, grading plan, planting plan, bioengineering plan, illustrative plan and section	May 2017

Implementation Schedule

2.7	**Develop Restoration Design Plan**	Restoration Design Plan (including: schematic level plan, sections, profile drawings and finalized project maps, grading plan, planting plan, bioengineering plan, illustrative plan and section drawings, written descriptions of the design, and native plant palette plan description)	May 2017
2.8a	**CEQA - Draft Initial Study (IS) for Mitigated Negative Declaration**	▪ Draft Mitigated Negative Declaration, with IS as an appendix	May 2017
2.8b	**CEQA - Final Draft Initial Study / Mitigated Negative Declaration**	▪ Comment responses ▪ Final Draft Mitigated Negative Declaration, with the revised IS as an appendix	July 2017
2.9	**NEPA – Environment**	▪ Proposed Action ▪ Decision Memo	▪ May 2017 ▪ July 2017
3.0	**Section 404 and 401 Permit Compliance**	401 and 404 permits	July 2017

Itemized Project Budget			
Sequoia Prioritized Meadows Restoration Project			
A. PERSONNEL SERVICES			
Level of Staff	**Hours**	**Rate**	**Total Project Cost**
Project Manager	1315.00	$ 32.00	$ 42,080
Grants Administrator	120.00	$ 30.00	$ 3,600
Lead Scientist	60.00	$ 40.00	$ 2,400
Geospatial Analyst	180.00	$ 50.00	$ 9,000
Project Director	16.00	$ 70.00	$ 1,120
Subtotal Personnel Services			$ 58,200
Staff Benefits @ 28%		28.00%	$ 16,296.00
TOTAL PERSONNEL SERVICES			**$ 74,496**
B. OPERATING EXPENSES: GENERAL			
Items (units)	**Number of Units**	**Cost per Unit**	**Total Project Cost**
Printing, Media			$ 500
Field Supplies (paper, clipboards, batteries, etc.)	0.00	$ -	$ 200
Permit Fees (CEQA ND [$2260], 401 [$250] and 404 [$100] permit fees)			$ 4,610
Travel Mileage (602 RT x 12 trips)	7224.00	$ 0.58	$ 4,154
Travel Lodging and Per Diem ($90 room plus $46 food at 12 trips)	12.00	$ 136.00	$ 1,632
See General Grant Provisions for applicable travel reimbursement rates			
<Insert or delete line items as needed>	0.00	$ -	$ -
Subtotal Operating Expenses: General			**$ 11,096**
C. OPERATING EXPENSES: SUBCONTRACTORS			
Sequoia National Forest			$ 64,931
Todd Sloat Biological Consulting Inc			$ 201,148
Overlin Biological Consulting			$ 22,931
Waterway Consulting Inc			$ 23,026
University of Nevada-Reno			$ 58,096
Solano			$ 46,466
Subtotal Operating Expenses: Subcontractors			**$ 416,598**
D. OPERATING EXPENSES: EQUIPMENT			
See General Grant Provisions for definitions of electronic and purchased equipment definitions.			
Laptop Computer with necessary software			$ 2,000
Peizometers			$ 30,000
HOBO Watertemperature Loggers			20,000
Subtotal Operating Expenses: Equipment			**$ 52,000**
TOTAL OPERATING EXPENSES			**$ 479,694**
E. SUBTOTALS & INDIRECT COSTS			
SUBTOTAL A + B (Personnel Services + Operating Expenses: General)			$ 85,592
SUBTOTAL C (Operating Expenses: Subcontractors)			$ 416,598
SUBTOTAL D (Operating Expenses: Equipment)			$ 52,000
Requested Indirect Charge Rate (max.20%) @ % (Indirect Charges cannot be applied to subcontracts or equipment)		14.00%	$ 11,982.85
TOTAL INDIRECT CHARGES			$ 11,982.85
D. GRAND TOTAL			**$ 566,173**

Total Project Budget			
Source of Funds	**Cash**	**In Kind**	**Total**
CDFW Restoration Grant Program	$ 486,173		$ 486,173
Sequoia National Forest	$ -	$ 30,000	$ 30,000
Upper Kern River Fisheries Enhancement Fund (Kern Community Foundation)	$ 50,000		$ 50,000
Total Project Cost	$ 536,173	$ 30,000	$ 566,173

United States Department of Agriculture | Forest Service | Sequoia National Forest
Giant Sequoia National Monument
1839 South Newcomb St.
Porterville, CA 93257-9353
(559) 784-1500
(559) 781-6650 TDD

File Code: 2520

Date: SEP 15 2015

California Department of Fish and Wildlife
Delta Water Quality and Ecosystem Restoration Grants Program Team
1416 9th Street, 12th Floor
Sacramento, CA 95814

To Whom It May Concern:

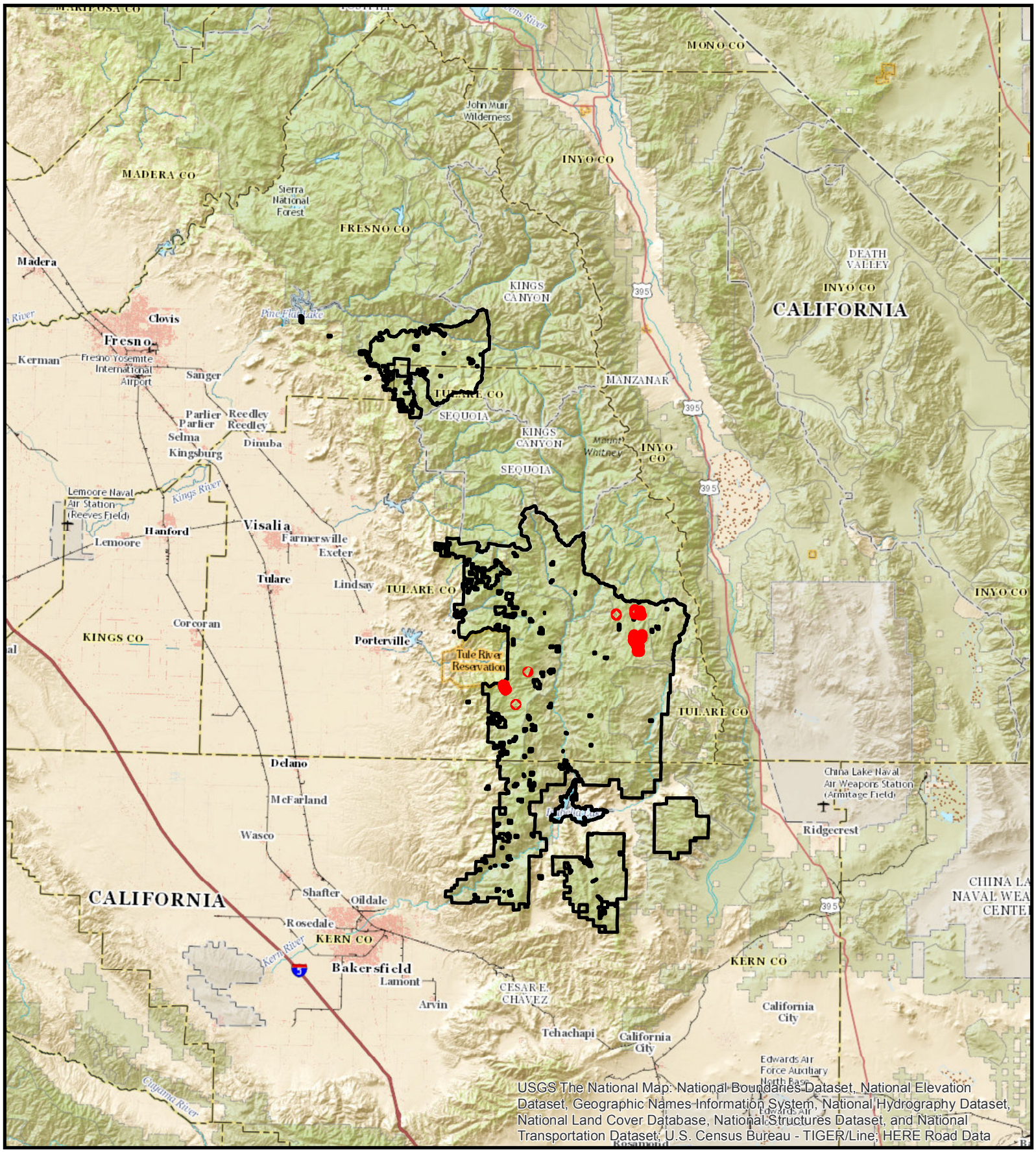
I am writing to express support of the project entitled:" Sequoia National Forest Prioritized Meadows Restoration Project" located in Kern River watersheds of the Sequoia National Forest. I am fully supportive of this project as the forest identified the 11 meadows as high priority for restoration planning and implementation. In this planning project, the forest's tasks relate to providing guidance for environmental compliance; assessments and monitoring; reviewing completed studies; and using these studies to complete necessary NEPA documentation. The Sequoia National Forest has extensive experience and will be able to work with the other grant associates to implement these tasks.

This project builds capacity for meadow planning and restoration implementation amongst environmental partners and the US Forest Service. Eleven meadows are to be evaluated for restoration; including habitats for Kern River rainbow trout, California golden trout, and mountain yellow-legged frog. This landscape level planning project will demonstrate the feasibility of accomplishing NEPA and permitting to enhance implementation opportunities across several large watersheds.

Sequoia National forest has successfully worked with many of the partners on the project team; I am confident this collaboration will be successful in producing excellent designs, NEPA/CEQA documents and completed permits. I urge the California Department of Fish and Wildlife to support this worthwhile planning project and we appreciate your thoughtful consideration.

Sincerely,

KEVIN B. ELLIOTT
Forest Supervisor



Sequoia National Forest Prioritized Meadows - Project Sites

Sequoia NF Boundary

N

Sequoia National Forest Prioritized Meadows Project
Trout Unlimited
(Quadrangles of individual project sites: Casa Vieja Meadow, Sentinel Peak, Johnsondale, California Hot Springs, Crag Peak, and Monache Meadow)

0 5 10 20 30 40
Miles