

Appendix B - Full Application Checklist

SNC Reference#: 829

Project Name: Markleevillage Fuels Reduction Project

Applicant: Alpine County

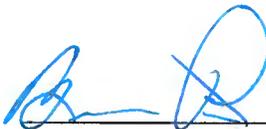
Please mark each box if item is included in the application. Please consult with SNC staff prior to submission if you have any questions about the applicability to your project of any items on the checklist. All applications must include a CD including an electronic file of each checklist item, if applicable. The naming convention for each electronic file is listed after each item on the checklist. (Electronic File Name = EFN: "naming convention". file extension choices)

Submission requirements for all Category One and Category Two Grant Applications

1. Completed Application Checklist (EFN: *Checklist.doc, .docx, or .pdf*)
2. Table of Contents (EFN: *TOC.doc, .docx, or .pdf*)
3. Full Application Project Information Form (EFN: *Siform.doc, .docx, or .pdf*)
4. CCC/Local Conservation Corps Document (EFN: *CCC.pdf*)
5. Authorization to Apply or Resolution (EFN: *authorization.doc, .docx, or .pdf*)
6. Narrative Descriptions (EFN: *Narrative.doc or .docx*)
 - a. Detailed Project Description (5,000 character maximum for section 5a only)
 - Project Description including Goals/Results, Scope of Work, Location, Purpose, etc.
 - b. Workplan and Schedule
 - c. Restrictions, Technical/Environmental Documents and Agreements
 - Restrictions / Agreements (EFN: *RestAgree.pdf*)
 - Regulatory Requirements / Permits (EFN: *RegPermit.pdf*)
 - d. Organizational Capacity
 - e. Cooperation and Community Support
 - Letters of Support (EFN: *LOS.pdf*)
 - f. Tribal Consultation Narrative (EFN: *tribal.doc, docx*)
 - g. Long Term Management and Sustainability
 - Long-Term Management Plan (EFN: *LTMP.pdf*)
 - h. Performance Measures
7. Budget documents
 - a. Detailed Budget Form (EFN: *Budget.xls, .xlsx*)
8. Supplementary Documents
 - a. Environmental Documentation
 - California Environmental Quality Act (CEQA) documentation (EFN: *CEQA.pdf*)
 - National Environmental Policy Act (NEPA) documentation (EFN: *NEPA.pdf*)
 - b. Maps and Photos
 - Project Location Map (EFN: *LocMap.pdf*)
 - Parcel Map showing County Assessor's Parcel Number(s) (EFN: *ParcelMap.pdf*)

- Topographic Map (EFN: *Topo.pdf*)
- Photos of the Project Site (10 maximum) (EFN: *Photo.jpg, .gif*)
- c. Additional submission requirements for Fee Title Acquisition applications only
 - Acquisition Schedule (EFN: *acqSched.doc, .docx or .pdf*)
 - Willing Seller Letter (EFN: *WillSell.pdf*)
 - Real Estate Appraisal (EFN: *Appraisal.pdf*)
- d. Additional submission requirements for Site Improvement / Restoration Project applications only
 - Land Tenure Documents (EFN: *Tenure.pdf*)
 - Site Plan (EFN: *SitePlan.pdf*)
 - Leases or Agreements (EFN: *LeaseAgmnt.pdf*)

I certify that the information contained in the Application, including required attachments, is accurate, and that I have been authorized to apply for this grant.


 Signed (Authorized Representative)

8-27-15
 Date

Brian Peters, Director of Community Development

 Name and Title (*print or type*)

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application

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SIERRA NEVADA CONSERVANCY	
PROPOSITION 1 – Watershed Improvement Program Project Information Form	
SNC REFERENCE #	
PROJECT NAME	
APPLICANT NAME (<i>Legal name, address, and zip code</i>)	
AMOUNT OF GRANT REQUEST	
TOTAL PROJECT COST	
PROJECT LOCATION (<i>County with approx. lat/long, center of project area</i>)	
SENATE DISTRICT NUMBER	ASSEMBLY DISTRICT NUMBER
PERSON WITH MANAGEMENT RESPONSIBILITY FOR GRANT CONTRACT	
<i>Name and title</i> <i>Phone</i> <i>Email Address</i>	
<input type="checkbox"/> Mr.	
<input type="checkbox"/> Ms.	
TRIBAL CONSULTATION CONTACT(S) INFORMATION	
<i>Name:</i> <i>Phone Number:</i>	
<i>Email address:</i>	
COUNTY ADMINISTRATOR OR PLANNING DIRECTOR CONTACT INFORMATION	
<i>Name:</i> <i>Phone Number:</i>	
<i>Email address:</i>	
NEAREST PUBLIC WATER AGENCY CONTACT INFORMATION	
<i>Name:</i> <i>Phone Number:</i>	
<i>Email address:</i>	

Please identify the appropriate project category below and provide the associated details *(Choose One)*

Category One Site Improvement

Category Two Pre-Project Activities

Category One Acquisition

Site Improvement/ Acquisition Project Area

Total Acres:

SNC Portion (if different):

Acquisition Projects Only For Acquisitions Only

Appraisal Included

Select one primary Pre-Project deliverable

Permit

CEQA/NEPA Compliance

Appraisal

Condition Assessment

Biological Survey

Environmental Site Assessment

Plan

California Association of Local Conservation Corps

Proposition 1 - Water Bond

Consultation Review Document

Applicant has submitted the required information by email to the Local Conservation Corps (CALCC):

✓ Yes (applicant has submitted all necessary information to CALCC)

After consulting with the project applicant, the CALCC has determined the following:

✓ It is NOT feasible for CALCC to be used on the project (deemed compliant)

APPLICANT WILL INCLUDE THIS DOCUMENT AS PART OF THE PROJECT APPLICATION.

**California Conservation Corps
Proposition 1 - Water Bond
Consultation Review Document**

Applicant has submitted the required information by email to the California Conservation Corps (CCC):

✓ Yes (applicant has submitted all necessary information to CCC)

After consulting with the project applicant, the CCC has determined the following:

✓ It is NOT feasible for CCC to be used on the project (deemed compliant)

APPLICANT WILL INCLUDE THIS DOCUMENT AS PART OF THE PROJECT APPLICATION.

RESOLUTION NO. R2015-38

**RESOLUTION OF THE BOARD OF SUPERVISORS,
COUNTY OF ALPINE, STATE OF CALIFORNIA**

**AUTHORIZING THE COMMUNITY DEVELOPMENT DIRECTOR TO SUBMIT A FINAL
GRANT APPLICATION FOR THE MARKLEEVILLAGE FUELS TREATMENT
PROGRAM TO THE SIERRA NEVADA CONSERVANCY FOR THE SIERRA NEVADA
WATERSHED IMPROVEMENT PROGRAM – PROPOSITION 1**

WHEREAS, the Legislature and Governor of the State of California have provided funds for the program shown above; and,

WHEREAS, the Sierra Nevada Conservancy (SNC) has been delegated the responsibility for the administration of a portion of these funds through a local assistance grants program, establishing necessary procedures; and,

WHEREAS, said procedures established by the Sierra Nevada Conservancy require a resolution certifying approval of the application(s) by the Applicant's governing board before submission of said application(s) to the SNC; and,

WHEREAS, the Applicant, if selected, will enter into an agreement with the SNC to carry out the project; and

WHEREAS, Alpine County has identified the Markleevillage Fuels Treatment Program project as valuable toward meeting its mission and goals.

BE IT HEREBY RESOLVED by the Board of Supervisors, County of Alpine, State of California that this Board:

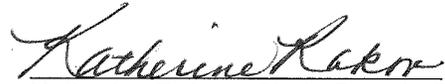
1. Approves the submittal of an application for the Markleevillage Fuels Treatment Program; and
2. Certifies that the Applicant understands the assurances and requirements in the application; and
3. Certifies that as the responsible land management agency, the Humboldt-Toiyabe National Forest will have sufficient funds to operate and maintain the resource(s) consistent with the long term benefits described in support of the application; or will secure the resources to do so; and
4. Certifies that the Applicant will comply with all legal requirements as determined during the application process; and
5. Appoints Brian Peters, Community Development Director or his designee, as agent to conduct all negotiations, execute and submit all documents, including but not limited to: applications, agreements, payment requests, and so on, which may be necessary for completion of the aforementioned project.

PASSED AND ADOPTED this 18th day of August, 2015, by the following vote:

AYES: Supervisors Jardine, Hames, Rakow, Woodrow, Rawson

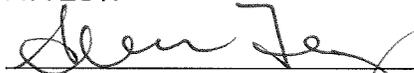
NOES: NONE

ABSENT: NONE



Katherine Rakow, Chair, Board of
Supervisors,
County of Alpine, State of California

ATTEST:



Teola L. Tremayne, County Clerk and ex-officio
Clerk to the Board of Supervisors
By: Stephanie Fong, Asst. County Clerk.

APPROVED AS TO FORM:



David Prentice, County Counsel

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application - Narrative

Detailed Project Description

During the 2016-2018 performance period, the Markleevillage Fuels Reduction Project will treat 234 acres of a larger 1,200 acre plan. The project is located on the Carson Ranger District of the Humboldt-Toiyabe National Forest, approximately 1.5 mile outside the town of Markleeville, California. The Markleevillage proposal would be implemented through a working partnership between Alpine County (County), Carson Ranger District of the U.S. Forest Service (USFS), Alpine Watershed Group (AWG) and the Alpine Fire Safe Council (AFSC).

Purpose & Need

The purpose of the project is to further community wildfire protection efforts by continuing the implementation of the Markleevillage Fuels Reduction Project. The project will reduce fuel loads around rural, residential areas near Markleeville. The treatment areas involved in this proposal are contiguous with previous treatments conducted by the USFS, ongoing roadside thinning by Alpine County, facility protection efforts by Grover Hot Springs State Park, and defensible space efforts by private residents. The elevation of the project area ranges from 5,700 to 6,500 feet. The proposed area is forested and lies within the threat and defense zones of the Wildland Urban Interface (WUI).

This project is of critical need due to the fact that the Markleevillage and Shay Creek communities have limited egress in the event of wildfire. These communities not only have limited access, they are located within a high fire concern area. According to the project's Environmental Assessment document, between 1980 and 2008, eleven fires started within the project area, seven due to natural causes and four human causes. Similar ignition statistics occur in the surrounding area. Within one mile of the project area, 44 natural and 13 human-caused fires occurred within the same time period.

The 2016-18 phase of the Markleevillage Project furthers the goals and objectives outlined in the Toiyabe National Forest Land and Resource Management Plan (USDA 1986), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004), and helps move the project area towards desired conditions described in those plans. Key resource values in the Alpine area are developed and dispersed recreation, wildlife, aesthetics, and watershed.

State and Regional Benefits

This project aligns directly with State planning priorities such as the California Water Action Plan and the SNC's Watershed Improvement Program. By reducing hazardous wildfire fuels, this effort will provide multiple benefits in watershed condition. These include increasing forest vigor, enhancing wildlife habitat, improving water filtration ability and augmenting carbon storage capacity.

This project is a valuable tool in furthering the Proposition 1 purposes of watershed health and climate adaptation. Specifically, project work will effectively create healthier forests by minimizing wildfire fuels, allowing larger trees to maintain their vigor and increasing carbon storage in large trees. Fuels reduction will also create cooler microclimates which can prevent the long-term transition to warmer climate species, called “thermophilization”.

In light of climate change, resource management agencies need to boost the resiliency of our forests. An enhanced vegetative environment will minimize the potential for catastrophic wildfire, disease, and insect infestations.

Goals

The Environmental Assessment prepared by the Humboldt-Toiyabe National Forest identified the following goals for the Markleeville Village Fuels Reduction Project:

- Provide for and maintain a reduced wildland fire hazard by reducing fuel loading and ladder fuels in forested and shrub areas around the Shay Creek, Markleevillage, Thornburg and Carson Ridge subdivisions, as well as Grover Hot Springs State Park
- Improve watershed conditions and protect municipal watersheds from adverse effects of wildland fire on soil and water quality
- Maintain conditions to reflect more natural or historical fire regimes
- Provide and maintain defensible areas for firefighters to manage future wildland fires

The deliverables that will be accomplished through the proposed 2016-2018 phase are as follows:

- Hazardous fuel reduction and watershed condition improvement on 234 acres of land
- Education of at least 100 community members (both youth and adults) about the importance of fuels reduction and the nexus with watershed health
- Development of an agreement between the County and USFS in order to complete project work
- Coordination of 3 partner meetings for successful project implementation

History & Scope

This work is part of the ongoing effort to implement the larger Markleevillage Fuels Reduction Project. Previous work completed by the USFS includes the following:

- 148 acres masticated in 2010 & 2013
- 78 acres of handwork conducted in 2011, 2012 and 2013
- 79 acres of under-story burning conducted in 2011, 2012 and 2013

A total a 305 acres have been treated since 2011.

Workplan and Schedule

In order to ensure thorough and successful project implementation, there are two primary elements involved in the completion of the project – 1) Fuels Reduction Implementation and 2) Partner Coordination & Community Outreach

Fuels Reduction Implementation

The Project will treat fuels within the 1,200 acre Markleevillage Fuels Reduction Project. A total of 234 acres of forest within the threat and defense zones of the WUI have been targeted for treatment. The project area lies completely within the Carson Ranger District of the Humboldt-Toiyabe National Forest.

This project will use standard mechanical treatments implemented by trained and knowledgeable workers to treat the targeted 234 acres. Prescriptions will include removing heavy brush, small trees (up to 12” DBH) and other under story fuels by mechanized mastication. Treatment Area 1 (Pleasant Valley) contains 140 acres and will be treated between October 2016 and March 2017. Treatment Area 2 (Thornburg Canyon) contains 94 acres and will be treated between October 2017 and March 2018.

Existing roads would be utilized to implement this project; no new roads would be constructed. This alternative is the non-commercial funding alternative required by the November 3, 2009 Remedy Ruling by Judge England regarding the 2004 Framework (Sierra Nevada Forest Plan Amendment). All treatments would be accomplished by a Fuels Reduction Contractor. The season for fuels reduction implementation has been identified by the USFS as October – March. It has been identified that two field seasons would be necessary for fuels reduction work.

Partner Coordination & Community Outreach

Partner coordination is a critical component of successful project implementation. The Alpine Watershed Group will serve the role of Partner Coordinator. This will involve keeping the partners informed about project status through regular updates and periodic partner meetings. AWG will support the County in maintaining communications with project partners and in tracking project implementation.

The project will also include community outreach and education. A school-based education program will be implemented about fire threats, fuels reduction and healthy watersheds. At least 50% of all kindergarten through 8th grade students at Diamond Valley Elementary School in Alpine County will be involved in this education program. In addition, project partners will hold a public meeting to educate the community on the objectives of this project, the ongoing need for fuels reduction and the nexus between forest health and water quality. This effort will be used to garner public support for future fuels treatment projects and to establish new partnerships for securing future grants.

Project Schedule

As mentioned above, two field seasons would be necessary for fuels reduction work. The project is anticipated to proceed in a timely manner according to the following schedule:

Detailed Project Deliverables	Timeline
Project Commencement	April 2016
Agreement between USFS and County	April – May 2016
Partner meeting	May 2016
Fuel reduction contract development	May – July 2016
Bid release and contractor hiring	July – September 2016

Community outreach & education	September 2016 – May 2017
6-month progress report	October 2016
Treatment Area #1 implementation	October 2016 – March 2017
Partner meeting	March 2017
6-month progress report	April 2017
6-month progress report	October 2017
Treatment Area #2 implementation	October 2017 – March 2018
6-month progress report	April 2018
Partner meeting	May 2018
SNC Final Report	June 2018

Restrictions, Technical/Environmental Documents and Agreements

Restrictions / Agreements

A final archaeological survey will need to be conducted prior to project implementation. Complete archeological surveys have already been conducted under NEPA. This final survey is routine practice in order to ensure protection of archaeological resource. Any new finds would be flagged off from treatment activities and avoided. USFS has already made arrangements for this assessment to occur in the event this proposal is funded.

Before work can be implemented on National Forest System Lands from an outside funding source, an agreement between Alpine County and the Humboldt-Toiyabe N.F. would need to be signed. Steps to complete this agreement have already been discussed by the parties and the process should be fairly simple to complete.

Description of Regulatory Requirements/Permits Needed

The only additional regulatory requirement for this project is compliance with the CEQA. Since the project is on USFS land, it was not foreseen to need a CEQA document until this Sierra Nevada Conservancy grant opportunity arose. Alpine County will be the lead agency for CEQA. An initial study and mitigated negative declaration as required by CEQA is targeted for completion in September, with circulation for comment and review complete in October, and approval by the Board of Supervisors expected by early November. Alpine County anticipates using the Environmental Assessment prepared in accordance with the NEPA as a template for the CEQA documents. Pursuant to AB 52, Alpine County has already submitted the Local Government Tribal Consultation List Request to the Native American Heritage Commission.

The U.S. Forest Service completed an Environmental Assessment under NEPA, receiving a Decision Notice/Findings of No Significant Impact for the Markleevillage Fuels Reduction Project which was signed in September of 2010.

Project implementation will be required to comply with all the mitigation measures documented in the Environmental Assessment and the Mitigated Negative Declaration. No permitting processes are foreseen in the proposed treatment area. The treatment does not need a permit through Lahontan Regional Water Quality Control Board, the activities being proposed fall

within Category 1 of the 2014 Timber Waiver Form. Implementation will take place outside of bird migration periods.

Organizational Capacity

Alpine County will act as the lead agency to implement the grant, serving as fiscal agent and project manager. Alpine County will also manage the contractor bid process and award. The USFS would be responsible for supervision and inspection of work on the ground with assistance by the County and the Alpine Fire Safe Council. The County and USFS have each been responsible for successful fuels reduction projects in the past. However, this is the first time that the USFS and County have directly partnered to implement fuels reduction on USFS land. This effort sets the stage for an expanded capacity to meet the long-term fuels reduction needs in Alpine County.

The Alpine Watershed Group (AWG) will assist with partner coordination, grant management, community outreach and youth education. AWG has over 10 years of experience in those roles in Alpine County. As the primary grant managers, both Alpine County and Alpine Watershed Group have experience in managing complex projects. Using the combined skills of our partnership and collaborating with experienced land agencies, we have the expertise and capacity to conduct a successful project.

AWG offers strength as a community-based, collaborative organization. AWG has a proven track record for coordinating watershed programs and managing grant funding. AWG has been serving Alpine County in the arena of watershed planning, monitoring and restoration for over ten years. AWG has consistently partnered with Alpine County on numerous projects and activities, and has always received strong support from the County's Board of Supervisors. Over the years, AWG has developed close partnerships with the Humboldt Toiyabe National Forest, Alpine Fire Safe Council, local fire departments and the Washoe Community Council.

Alpine Fire Safe Council (AFSC) is another key partner in this project as they are the leader in community-based fire safety in the area. AFSC will support project implementation as well as conduct some on-site project oversight and inspections.

Cooperation and Community Support

The project is a partnership between Alpine County (the County), Carson Ranger District of the US Forest Service (USFS), Alpine Watershed Group (AWG) and the Alpine Fire Safe Council (AFSC). Other supporters include Eastern Alpine County Volunteer Fire Department, American Rivers, California State Parks, CalFire, Carson Water Subconservancy District, and Washoe Tribe of Nevada and California.

Fuels reduction projects in rural Alpine County have garnered broad support throughout local communities. Residents of Alpine County are keenly aware of the threat that wildfire poses to their cherished landscapes, celebrated streams and communities. Objectives and implementation measures in the Alpine County General Plan support fuels reduction projects which reduce the threat of wildland fire in the wildland urban interface. This project builds on both previous and

continuing fuels reduction and community education efforts enacted by project partners. All of the partners involved in this project have been actively working to promote fire safety and healthy watersheds for many years.

This project leverages past SNC-funded watershed programs by tying fuels reduction and fire safety into forest health and watershed condition. Treated lands will directly benefit previous restorations and water quality projects conducted by AWG and other SNC-funded partners, specifically American Rivers.

The majority of the acreage to be treated is in close proximity to private and state lands. By working in parallel with homeowners and land agencies, we hope to maximize the effectiveness of past contiguous treatments.

Tribal Support

The Carson Ranger District consulted with the Washoe Tribe of Nevada and California during focused consultation meetings in 2010. The tribe supports the Markleevillage Fuels Reduction Project.

The tribe is engaged in community collaboration for the sake of long-term fuels reduction and fire safety. They also have expressed interest in partnering to complete needed fuels reduction work on tribal land. There are projects in which the County, USFS and Tribe could collaborate on fuels reduction on tribal land in the future. One such property is in Upper Wade Parcel which is adjacent to the USFS's Manzanita Fuels Reduction Project which has begun implementation over the past couple of years. Additional planning and environmental documentation would need to occur in order to implement fuels reduction work on the Upper Wade Parcel.

Members of the Woodfords Washoe Community Council and the Washoe Tribe Environmental Protection Department attended the Community Forum on Fuels Reduction and Forest Health in May 2015 hosted by the Alpine Watershed Group. That forum initiated project ideas for this grant proposal and identified additional needs on public and private lands.

The primary tribal representatives consulted about this project are the following individuals:

- Rob Beltramo, Washoe Tribal Planning Director, rob.beltramo@washoetribe.us
- Neil Mortimer, Tribal Chairman, neil.mortimer@washoetribe.us
- Irvin Jim, Hung-A-Lel-Ti Community Council Chairman, irvin.jim@washoetribe.us
- Norman Harry, Program Director Washoe Tribe Environmental Protection Department
- Michelle Hochrein, Program Coordinator, Washoe Tribe Environmental Protection Department

Both the Tribal Council and the Woodfords Community Council submitted letters of support for this grant application.

Long Term Management Plan and Sustainability

The 2016-18 Markleevillage project furthers the goals and objectives outlined in the Toiyabe National Forest Land and Resource Management Plan (USDA 1986), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004), and helps move the project area towards desired conditions described in those plans. This serves as the primary document of record for fuels management in the Upper Carson River Watershed. The Markleevillage Fuels Reduction Project meets the goals and objectives outlined in the Sierra Nevada Forest Plan Amendment.

This project is an authorized hazardous fuels reduction project in accordance with the HFRA because: (i) the project is located on Federal lands within a wildland urban interface (WUI) area of an at-risk community and (ii) the project is being conducted under sections 103 and 104 of the HFRA. Past projects have been completed in the general area and this project will help connect past projects completed by the Forest Service creating a more effective fuel break.

The Healthy Forest Restoration Act of 2003 (HFRA) was signed into law on December 3, 2003. The purpose of the HFRA is in part to: (A) reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects; (B) enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape and; (C) protect, restore, and enhance forest ecosystem components, promoting the recovery of threatened and endangered species to improve biological diversity and enhance productivity and carbon sequestration (HR 1904). The Markleevillage Fuels Reduction analysis was completed under HFRA (USDA DOI 2004).

Monitoring Plan

This project would use an adaptive management approach, where the treatments are implemented, monitored and adapted. Monitoring would determine if the desired conditions are being met. Monitoring would be comprised of the following actions as identified in the Decision Notice/FONSI (September 2010):

Action	Method	Timing
Evaluate the effectiveness of tree and fuels treatments in meeting resource objectives	Photo points	Pre and post project activities
Evaluate burning conditions, fuel consumption and fire effectiveness	Observations during and after burns	During and post burn
Ensure archeological sites are not impacted	Field visits	Pre, during and post activity

Photo points will be taken and monitoring will occur over the next several years to determine the success of the treatments. The existing Decision Notice allows for maintenance to be conducted within the analysis area of the Markleevillage Fuels Reduction Project. The project site is within the WUI and will be a high priority for maintenance of treatments in future years. Continued

photo monitoring of the project area, with the comparison of past and current photo points will support the decisions to perform maintenance and to develop funding requests.

Performance Measures

Acres of Land Improved

This project will improve 234 acres of National Forest lands. By reducing hazardous wildfire fuels, this effort will improve overall watershed condition by increasing forest vigor, enhancing wildlife habitat, improving water filtration ability and carbon storage capacity.

Number of People Reached

The project will reach a minimum of 100 individuals, with the goal of gaining broader community support for the planning and implementation of long-term fuels reduction projects. The community outreach process will involve at least one public meeting, 5 classroom presentations and distribution of educational project materials. In order to reach out to as broad an audience as possible, the Alpine Watershed Group will implement multiple forms of outreach, including email announcements, flyers and press releases.

Resources Leveraged for the Sierra Nevada

This project is based on a collaborative, community-based planning process which involves a significant contribution of in-kind support from project partners. It is estimated that there will be approximately \$21,500 donated in technical guidance and planning support.

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application - Letters of Support

Project Partners

- Carson Ranger District, Humboldt Toiyabe National Forest
- Alpine Watershed Group
- Alpine Fire Safe Council

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Project Supporters

- American Rivers
- Carson Water Subconservancy District
- Eastern Alpine County Volunteer Fire Department
- Markleeville Water Company
- Washoe Tribe of Nevada And California – Tribal Council
- Washoe Tribe of Nevada And California – Community Council



United States
Department of
Agriculture

Forest
Service

Humboldt-Toiyabe National Forest

Carson Ranger District
1536 South Carson Street
Carson City, NV 89701
775-882-2766

Date: August 24, 2015

Brian Peters
Alpine County Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Carson Ranger District of the Humboldt Toiyabe National Forest would like to express our support for the Markleevillage Fuels Reduction Project.

We appreciate Alpine County taking the role as lead agency on a Sierra Nevada Conservancy grant application. This project is wholly on U.S. Forest Service (USFS) land and has been a priority for our land management agency for over 10 years. This is the first time that the USFS and County have directly partnered to implement fuels reduction on USFS land. This effort sets the stage for an expanded capacity to meet the long-term fuels reduction needs in Alpine County.

The Carson Ranger District will provide an in-kind match of \$10,000 for our role in contractor management and fuels reduction implementation. We will also continue to be an active part of the planning team which has come together to implement this important effort.

This project is critical as it will decrease wildland fire hazard by reducing fuel loading and ladder fuels in forested and shrub areas around the Shay Creek, Markleevillage, Thornburg Canyon and Carson Ridge subdivisions, as well as Grover Hot Springs State Park. It will simultaneously serve to improve watershed conditions and protect municipal watersheds from the adverse effects of wildland fire on soil and water quality.

USFS funding is presently limited, which has delayed additional progress on this project since 2013. Grant funds from the Sierra Nevada Conservancy would allow for the continued successful implementation of this next phase. We hope that this project receives the funding it needs for execution.

Sincerely,

IRENE DAVIDSON
District Ranger

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO





Alpine Watershed Group

Protecting the Headwaters of the California Alps

August 28, 2015

Brian Peters
Alpine County Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Alpine Watershed Group (AWG) would like to express our support for the Markleevillage Fuels Reduction Project.

We are committed to the implementation of this project. This project is critical as it will serve to decrease fuel loading and improve watershed conditions. There is a huge need to protect our watersheds from the adverse effects of wildland fire on soil and water quality.

This project represents an exciting new partnership in Alpine County. This effort has brought together fire agencies and natural resource stewardship organizations for the sake of forest health on a different level than in the past. Partners are embracing the nexus between fuels reduction and watershed health.

AWG will provide an in-kind match of \$4,000 for our role in partner coordination, community outreach and youth education. We will also continue to be an active part of the planning team which has come together to implement this important effort.

We hope that this project receives the funding it needs for execution.

Sincerely,

Sarah Green
Executive Director

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

*P.O. Box 296 Markleeville, CA 96120
(530) 694-2327*



Alpine Fire Safe Council
PO Box 67
Markleeville, CA 96120
(530)-694-1879
www.alpinefiresafecouncil.org

Providing community leadership, resources and a forum to improve wildfire preparedness in eastern Alpine County.

Directors

Kris Hartnett, Chair
Markleeville

Steve Yonker, Vice-Chair
Woodfords

Tom Sweeney, Treasurer
Woodfords

David Griffith, FSC Board
Woodfords

Karrie Baker, FSC Board
Woodfords

Nani Ellis, FSC Board
Markleeville

Carol Daum, FSC Board
Woodfords

Terry Hughes, Fire Chief
E. Alpine Fire & Rescue

Staff

Kris Hartnett, Coordinator
Markleeville

Erin Dohyans, Administrator
Markleeville



**FIREWISE
COMMUNITIES**

Alpine Fire Safe Council

August 15, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Alpine Fire Safe Council would like to express our complete support for the Markleevillage Fuels Reduction Project. Our beautiful county recently suffered from the Washington Fire, which burned within approximately three miles south of our historic town of Markleeville. This Fuels Reduction project will help to protect the environmental, economic and social well being of Alpine County's popular recreational and community areas of high risk.

Declining forest health can compromise our plant life, wildlife, and water and air quality. The threat of a catastrophic fire in the Markleevillage or Grover Hot Springs areas could compromise access to recreation, and detrimentally limit community access to fire insurance.

This project would help to provide some resources desperately needed to help protect our county in reducing the risk of wildfire. It is in alignment with the goals and efforts of practically every agency, committee and citizen in Alpine County. The education component of this project will help to benefit society. Furthermore, this project can temporarily improve our economic conditions with fuels reduction crews patronizing our small businesses. There are many environmental quantifiable benefits expected from this project.

The Alpine Fire Safe Council will provide an in-kind match of \$500 for this project. Our support will involve attendance at partner meetings and participation in fuels reduction planning in Alpine County.

We hope that this project receives the funding it needs for implementation. It is an essential component of Alpine County's annual fuels reduction efforts. We look forward to collaborating with Alpine County on this project. Alpine Fire Safe Council is committed to the implementation of fuels reduction projects like this in Alpine County as it provides a direct benefit to our organization.

Sincerely,

Kris Hartnett
Alpine Fire Safe Council, President

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

RECEIVED

AUG 28 2015

ALPINE COUNTY
COMMUNITY DEVELOPMENT



American Rivers
Rivers Connect Us®

August 25, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

American Rivers would like to express our support for the Markleevillage Fuels Reduction Project.

American Rivers actively supports watershed restoration projects in Alpine County. We have partnered with the Alpine Watershed Group on a number of projects and have been impressed by their work in Indian Valley and Hope Valley meadow. The Fuels Reduction Project they propose addresses many of the goals in the SNC's Watershed Improvement Plan by providing improvements to forest health and wildlife habitat.

In addition, the threat of wild fire is a significant concern in Alpine County. The importance of this project is highlighted by the Washington Fire and the need for investment in wildfire prevention in order to protect our water resources.

We hope that this project receives the funding it needs for implementation.

Sincerely,

Luke Hunt, Ph.D.
Director of Headwaters Conservation

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

CARSON WATER SUBCONSERVANCY DISTRICT
777 East William Street, Suite 110A
Carson City, NV 89701
775/887-7450, fax 775/887-7457

August 21, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Carson Water Subconservancy District would like to express our complete support for the Markleevillage Fuels Reduction Project.

Our agency has worked with Alpine County for many years to promote watershed protection and ensure water quality for downstream users. This project is an important project in land management efforts for the Upper Carson River watershed. It provides multiple benefits including the protection of forest, water, and recreational resources.

The threat of wild fire is a significant concern in Alpine County. The recent Washington Fire has damaged the forests, denuded the vegetation, and exposed the soils, all of which threaten water quality.

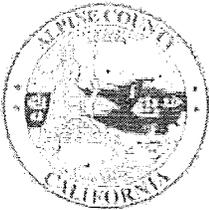
We hope that this project receives the funding it needs for implementation.

Sincerely,



Edwin D. James
General Manager

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO



COUNTY OF ALPINE
Office of the Eastern Alpine Fire Department

Terrance Hughes, EMS/Fire Administrator

August 21, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

Eastern Alpine Fire/Rescue would like to express our support for the Markleeville Fuel Reduction Project.

These fuel reduction efforts will help to better serve and protect Alpine County from structure fires and wildland fires. The threat of wild fire is significant in Alpine County given its abundance of forested lands and open space (Alpine County is 96% public land).

Eastern Alpine Fire Rescue is committed to the implementation of fuels reduction projects like this in Alpine County as it provides a direct benefit to our fire department.

~~* We will provide an in-kind match of \$ _____ for this project.~~

~~* [description of partner role/involvement commitment]~~

Our support and involvement will involve attendance at partner meetings and involvement in the fuel reduction planning in Alpine County.

Your help would be an essential component of Alpine County's annual fuels reduction to support efforts to prevent fires, and would be invaluable compared to the immense costs of fire suppression. We look forward to collaborating with Alpine County on this project.

Sincerely,

Terrance Hughes
Eastern Alpine Fire/Rescue Administrator

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

MARKLEEVILLE WATER COMPANY

P.O. Box 131

Markleeville, CA, 96120

(530) 694-2924

August 25, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

Markleeville Water Company would like to express our support for the Markleevillage Fuels Reduction Project.

Our company provides safe clean water for human consumption, and sanitary purposes. Reducing fuels from overgrown forest stands helps to mitigate a threat to our water quality which could potentially devastate our water supply in the event of a catastrophic fire.

We hope that this project receives the funding it needs for implementation. It is an essential component of Alpine County's annual fuels reduction efforts and fire protection. We look forward to collaborating with Alpine County on this project.

Sincerely,

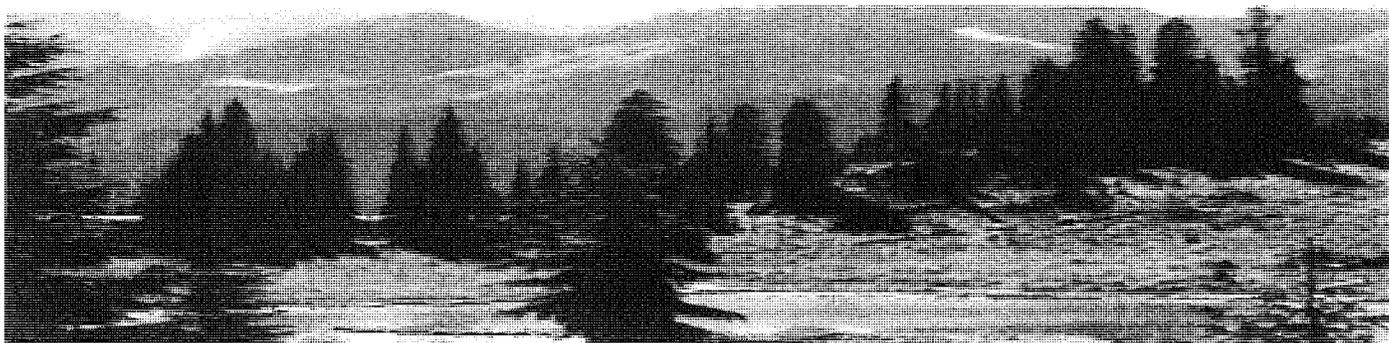


Markleeville Water Company
cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

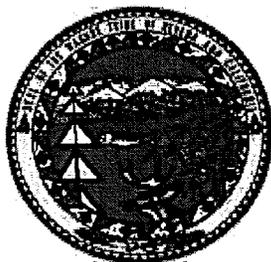
RECEIVED

AUG 28 2015

ALPINE COUNTY
COMMUNITY DEVELOPMENT



Washoe Tribe of Nevada and California



August 27, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Washoe Tribe of Nevada and California would like to express our support of the Markleevillage Fuels Reduction Project.

The United States Forest Service consulted the Tribe during the Environmental Assessment process back in 2010. The Washoe Tribe and Alpine County have a mutual interest in reducing fuels within our county given its abundance of forested lands.

The project has benefits not only to reduce the risk of catastrophic fire in a few high risk areas but also increases the connectivity of protecting our environment forest floor species from changes from catastrophic canopy disturbances resulting in climate change. Canopy disturbances from catastrophic fire may increase temperature and moisture stress on forest floors changing our microclimate and beautiful species within our region. We support this Fuels Reduction Project schedule for treatment to sustain forest health and public safety.

We look forward to collaborating with Alpine County, Forest Service, and other partners on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Neil Mortimer".

Neil Mortimer
Chairman of the Washoe Tribe of Nevada and California

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

HUNG - A - LEL - TI
WOODFORDS WASHO COMMUNITY COUNCIL

August 27, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

Dear Mr. Peters,

The Hung A Lel Ti Community Council, Southern Band of the Washoe Tribe of Nevada and California would like to express our support of the Markleeville Fuels Reduction Project.

The United States Forest Service consulted the tribe during the Environmental Assessment process back in 2010. The Washoe Tribe and Alpine County have a mutual interest in reducing fuels within our county given its abundance of forested lands.

The project has benefits not only to reduce the risk of catastrophic fire in a few high risk areas but also increases the connectivity of protecting our environment forest floor species from changes from catastrophic canopy disturbances resulting in climate change. Canopy disturbances from catastrophic fire may increase temperature and moisture stress on forest floors changing our microclimate and beautiful species within our region. We support this Fuels Reduction Project schedule for treatment to sustain forest health and public safety.

We look forward to collaborating with Alpine County, Forest Service, and other partners on this project.

Sincerely,



Irvin Jim Jr.
Chairman
Hung A Lel Ti Community Council

Washoe Tribe of Nevada and California



August 27, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

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Neil Mortimer
Chairman of the Washoe Tribe of Nevada and California

cc: Alpine County Board of Supervisors
Carol McElroy, Alpine County CAO

HUNG - A - LEL - TI

WOODFORDS WASHO COMMUNITY COUNCIL

August 27, 2015

Brian Peters
Alpine County
Community Development Department
50 Diamond Valley Road
Markleeville, CA 96120

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We look forward to collaborating with Alpine County, Forest Service, and other partners on this project.

Sincerely,



Irvin Jim Jr.
Chairman
Hung A Lel Ti Community Council

Record of Decision

I. The Decision

This decision adopts an integrated strategy for vegetation management that is aggressive enough to reduce the risk of wildfire to communities in the urban-wildland interface while modifying fire behavior over the broader landscape. With the careful placement of thinning projects, we can make significant progress in reducing the threat of catastrophic fires to wildlife and watersheds.

My decision vitally improves the land and resource management plans (LRMPs) for the Sierra Nevada national forests based on Alternative S2, as described in the Final SEIS. This Record of Decision (ROD) replaces the January 2001 ROD for the Sierra Nevada Forest Plan Amendment (SNFPA 2001 ROD) in its entirety. All of the management direction for this decision is included in this document (Appendix A). The SEIS represents an analysis and planning document and does not provide management direction.

I am making this decision in the aftermath of the tragic southern California fire season where 26 people died, over 3,600 homes were destroyed, and peoples' lives were turned upside down. In addition, precious wildlife habitat was destroyed. These catastrophic events, which I personally witnessed for 11 days, could also occur in the Sierra Nevada. I will not let that happen on my watch. These events may happen again anyway, because our forests are unnaturally overstocked. But there are reasonable changes that can be made to the SNFPA to help prevent them. I am determined to make those improvements.

In my judgment, the changes are not large, but they are extremely important. This decision retains the overall goals of the SNFPA 2001 ROD and its land allocations. It retains the overall strategy for addressing the fire situation in the Sierra in combination with key components of the conservation strategy for old forest dependent species. The integrated strategy includes methods of thinning of trees and brush removal, known as "fuels treatments," that is, reducing the amount of burnable material. Fuels treatments will occur more effectively on roughly the same number of acres and cover only 25-30% of the landbase. However, I am changing the way management occurs in those treated areas and directing field personnel to develop projects that make sense from an ecological and financial perspective. I expect that they will make the right decisions in the design and implementation of projects consistent with the direction and intent of this decision.

Much more remains to be done to bring our forests back to more normal conditions. There is a huge job at hand to reduce a massive build up of biomass covering nearly 8 million acres of forestland in this region. Working steadily, we will need at least 20 years to begin to reverse this situation. Even still, each year the proposed thinning will remove less than .3% of the standing inventory and only 1/5 of the net annual growth. So, while the proposed treatments will make our communities and forests safer, the forests will continue to become denser. Over time, it is my belief that there will be better public understanding of the need to thin our forests and retain their open, big tree character. I am troubled that this need is not more widely understood by our publics today.

This decision is based on careful consideration of the scientific reviews and public comments on the Draft Supplemental Environmental Impact Statement (SEIS) prepared pursuant to the National Environmental Policy Act (NEPA). I have reviewed the Final SEIS, including the land allocation maps and the standards and guidelines for each alternative. I have also reviewed the comments of the Science Consistency Review prepared by the Pacific Southwest Research Station (October 2003) and included in the Final SEIS, Appendix E. I am satisfied that the available science has been used appropriately in the analysis of the environmental effects of the alternatives in the Final SEIS.

Although this decision is grounded in the best available scientific information, it is impossible to have perfect knowledge about how management actions will play out in complex ecosystems. I want to make steady progress in closing that gap. The Region will work in close partnership with the Pacific Southwest Research Station to address some of the management uncertainties we've been wrestling with for years. My decision embraces the concept of active adaptive management and I fully intend to expand upon opportunities to gather information and understanding as this decision is implemented.

This decision replaces the standards and guidelines of the SNFPA 2001 ROD to ensure that fuels treatments will effectively modify wildland fire behavior. In addition, the basic strategy is broadened to include other management objectives such as reducing stand density for forest health, restoring and maintaining ecosystem structure and composition, and restoring ecosystems after severe wildfires and other large catastrophic disturbance events.

This decision also addresses the need to retain industry infrastructure by allowing more wood by-products to be generated from fuels treatments and dead and dying trees to be harvested during salvage operations. It acknowledges that the Forest Service has a role to play in providing a wood supply for local manufacturers and sustaining a part of the employment base in rural communities. In some cases, these wood by-products will also help to offset the cost of fuels treatments.

This decision adopts standards and guidelines for willow flycatcher habitat, Yosemite toad habitat, great gray owl protected activity centers, and grazing utilization standards that better reflect the wide array of site conditions encountered in the field and the management opportunities they may provide.

This decision clarifies management intent for off-highway vehicles, limits the requirement for limited operating periods to vegetation management activities only, and clarifies how several of the riparian standards and guidelines apply to recreation activities, uses, and projects. These changes will give local managers the opportunity to develop mitigation measures for small and varied recreation projects on a project- and site-specific basis.

The management direction for sensitive species habitat is designed with the primary objective to conserve rare and likely important components of the landscape such as stands of mid- and late-seral forests with large trees, structural diversity and complexity, and moderate to high canopy cover. Thinning from below and uneven-age management are the principal silvicultural prescriptions to achieve immediate objectives. Thinning trees and removing underbrush in strategic locations, whether by mechanical means or wildfire, will be the primary processes that create forest openings to encourage regeneration of shade-intolerant species and maintain gene pools of these species.

The decision is described in detail under Alternative S2, chapter 2, in the Final SEIS. In summary, it:

- Adopts an approach for modifying wildland fire behavior across broad landscapes through the strategic placement of area treatments, including direction to avoid California spotted owl protected activity centers (PACs) and northern goshawk PACs wherever possible,
- Requires a landscape level assessment of opportunities and constraints to be completed as a first step in designing the pattern of fuels treatments needed to implement the fire and fuels strategy,
- Provides mechanisms for more efficiently using appropriated funds,
- Provides opportunities to reduce stand density and improve tree vigor and overall forest health,
- Provides for ecosystem restoration following catastrophic disturbance events,
- Allows for salvage of dead and dying trees for both economic value and fuels reduction purposes,
- Incorporates new fuels and vegetation management standards and guidelines,
- Re-establishes the Heger-Feinstein Quincy Library Group (HFQLG) Forest Recovery Act Pilot Project consistent with the HFQLG Forest Recovery Act, and
- Adopts an active and focused adaptive management and monitoring strategy.

completion of a number of research studies currently under way. There is concern about persistence of the species because of its limited and fragmented distribution. Therefore, I am initiating discussion with the California Department of Fish and Game to explore re-introduction opportunities.

Fire and Fuels Management

The SNFPA goals for fire and fuels management are still valid. These goals are so important that issues that have impeded implementation during the past three years cannot be ignored. Doing little or nothing is not acceptable. Actions are needed to effectively treat vegetation in key areas to reduce the risk of future tragedies, like the 2003 fires in Southern California and elsewhere in the west. I am willing to take a more active approach to this problem because of the significant risks catastrophic fire poses to firefighter safety and communities. This approach still provides for the canopy cover, big trees and understory required by the California spotted owl and other species. I have considered input from Forest Supervisors, District Rangers, the SNFPA Management Review, and a Washington Office Review of the fuel management strategy. All have consistently made similar findings. We cannot do the job we need to do with the direction in the SNFPA 2001 ROD.

Nearly 8 million acres are in condition class 2 and 3. Condition class 3 represents those areas at greatest risk of ecological collapse because it has been so long since fire operated as a process in the ecosystem. Condition class 2 lands are those areas where fire regimes have been so altered from their historic range of fire return interval that they are at moderate risk of losing key ecosystem components as a result of wildfire. The situation is ripe for more firestorms, like we experienced in southern California in 2003 and throughout the west in recent years. We find ourselves needing more and more elite fire crews because of the complexity of fighting fire and the dangerous situations it puts fire fighting forces in. We have over 5,100 fire fighters in Region 5. These forces are being stretched thin across long fire seasons nationwide and by State budget crises that affect their ability to marshal forces. Despite the heroic efforts of our elite firefighters and the most advanced fire fighting technology in the world, we continue to suffer unacceptable loss of life, property and critical habitat. Under these circumstances we cannot expect our suppression forces to continue to be effective if vegetation conditions aren't altered.

Our ability to strategically place fuel treatments for optimum effectiveness has been compromised by the set of complicated rules in the SNFPA 2001 ROD. The standards and guidelines in that ROD are applied at the stand level, rather than by land allocations. An individual area treatment generally encompasses numerous individual stands, requiring each stand to be delineated so that the appropriate standards and guidelines could be applied. Some of the rules are so detailed that they prescribe down to one acre what is allowed, and require measuring change in canopy to ten percent increments, which is not consistently practical with existing measurement tools. This fine-scale approach limits our ability to make significant progress.

To allow more flexibility to strategically locate fuel treatments and implement effective treatments, this decision adopts standards and guidelines for mechanical thinning treatments in mature forest habitat (CWHR types 4M, 4D, 5M, 5D, and 6) outside defense zones. These standards and guidelines specify (1) minimum canopy cover levels, basal area of trees to retain following mechanical thinning treatments, and retention of all trees 30 inches or larger in diameter, (2) surface and ladder fuel post-treatment conditions in fuels treatment units, and (3) guidelines for post-fire restoration activities, general salvage, and snag and down woody material retention. Modified standards and guidelines are established for eastside pine vegetation types.

Depending on which timeframe is referenced (the past eight years, or past four years), 2.5 to 4.5 California spotted owl PACs are being lost to wildfire each year. Standards and guidelines in the SNFPA 2001 ROD were intended to provide protection for PACs. However, when these standards and guidelines are applied collectively, the threat to PACs from wildfire is increasing in both the short and long term. Once again, our ability to strategically place fuels treatments on the landscape has been compromised by

the complexity of rules. And, as more habitat is lost to wildfire, the opportunity to relocate PACs becomes more limited and results in more fragmentation of habitat. This decision is intended to reverse that trend. It allows mechanical treatments, where necessary in PACs in threat zones. Outside the wildland urban interface zone where necessary, PACs may be treated with prescribed fire.

PACs are still recognized as sensitive places on the landscape. We will continue to limit the total number of PAC acres treated annually and per decade. We will continue to avoid treatments in PACs to the greatest extent possible. Based on the landscape analyses done for the Middle Fork Consumnes River and two other watersheds, we can conclude that, although potentially 26% of the spotted owl PACs or 4% of PAC acreage could be affected by mechanical fuels and prescribed burn treatments in the next 20 years, in reality PAC locations can often be avoided. Further, if treated, only portions of PACs would be treated. A more accurate measure of monitoring the degree of habitat alteration appears to be acres treated rather than numbers of PACs entered.

Modifications to some of the diameter size limits imposed by the SNFPA 2001 ROD will improve the cost-effectiveness of projects. Despite these modifications, the net growth of our forests continues to far outpace harvest. This decision allows local managers to consider the removal of medium-sized trees (less than 30 inches diameter) at the site-specific project level, rather than to implement a uniform fuel hazard reduction prescription for the entire Sierra bioregion. We can make better choices by having the ability to consider crown positions and the numbers of trees within each diameter class and their contribution to ladder and crown fuels in the fuel profile at the project level. We can also factor in the frequency of entries to the site that will be needed to achieve desired reductions in condition class. Expanded use of mechanical treatments can be used to set the stage for prescribed fire as a follow-up treatment, or to deal with those specific situations when we are concerned about smoke or available burn days.

The emphasis in the SNFPA 2001 ROD to focus on removing small fuels, outside the threat and defense zones, effectively precludes most commercial options for removing fuels. The potential supply of raw material for biomass far exceeds regional market demand and is costly to get to market. We're losing the capacity to remove larger diameter fuels.

As the timber industry has waned, there have been situations in the west where markets simply were not available to accept the vast quantities of fuel that needed to be removed from the forest to make them resistant to fires and insects. When the predictable flow of wood products is lost, the cost of doing business increases, and wood processing facilities close. The result is that cost-effective marketing options for fuel treatments are also lost. Southern California forests struggled to dispose of thousands of acres of bark beetle- and drought-killed timber prior to the most catastrophic fire event in California's history. Similar scenarios occurred in other communities in California, Colorado, and Arizona following large fires and insect outbreaks. This decision is intended to keep some market options alive and enhance the profitability of removing the small fuels.

The total sale volume of green volume for the 11 national forests is estimated to be approximately 330 million board feet (MMBF) for the first decade, which includes approximately 210 MMBF from the pilot project for the Herger-Feinstein Quincy Library Group. Volume from salvage harvest is estimated to potentially contribute an additional 90 MMBF per year. This decision does not change the capable, available, and suitable timber land determinations made in individual forest plans. This decision does not schedule any regulated timber harvest from these lands. Scheduling regulated timber harvest and the associated Allowable Sale Quantity (ASQ) is part of the land and resource management planning process and will be addressed in forest plan revisions. During these plan revisions, long range forest sustainability and forest health considerations can be addressed. This decision is focused on some immediate short-term actions to begin to create conditions to restore fire in the ecosystem. At a minimum, in five years we will evaluate this decision as information from adaptive management experiments becomes available.

SIERRA NEVADA CONSERVANCY
SNC Watershed Improvement Program - DETAILED BUDGET FORM

Project Name: Markleevillage Fuels Reduction Project

Applicant: Alpine County

SECTION ONE DIRECT COSTS	Year One	Year Two	Year Three	Total
Project Management	\$1,000.00	\$7,000.00	\$7,000.00	\$15,000.00
Fuels Treatment		\$61,100.00	\$91,000.00	\$152,100.00
Partner Coordination	\$1,000.00	\$7,000.00	\$7,000.00	\$15,000.00
Community Outreach & Education	\$500.00	\$2,500.00	\$2,000.00	\$5,000.00
Evaluation/ Quality Control		\$1,000.00	\$1,000.00	\$2,000.00
				\$0.00
				\$0.00
DIRECT COSTS SUBTOTAL:	\$2,500.00	\$78,600.00	\$108,000.00	\$189,100.00

SECTION TWO PARTIAL INDIRECT COSTS	Year One	Year Two	Year Three	Total
Monitoring		\$2,500.00	\$2,500.00	\$5,000.00
Reporting, Perf Measures, Invoicing		\$5,000.00		\$5,000.00
Publications, Printing		\$500.00	\$500.00	\$1,000.00
				\$0.00
INDIRECT COSTS SUBTOTAL:	\$0.00	\$7,500.00	\$2,500.00	\$11,000.00
PROJECT TOTAL:	\$2,500.00	\$86,100.00	\$110,500.00	\$200,100.00

SECTION THREE Administrative Costs (Costs may not exceed 15% of the above listed Project)				Total
Organization operating/overhead costs	\$1,000.00	\$14,507.50	\$14,507.50	\$30,015.00
				\$0.00
				\$0.00
ADMINISTRATIVE TOTAL:	\$1,000.00	\$14,507.50	\$14,507.50	\$30,015.00
SNC TOTAL GRANT REQUEST:	\$3,500.00	\$100,607.50	\$125,007.50	\$230,115.00

SECTION FOUR OTHER PROJECT CONTRIBUTIONS	Year One	Year Two	Year Three	Total
Resource Management - USFS	\$1,000.00	\$4,500.00	\$4,500.00	\$10,000.00
Project Management - County		\$1,500.00	\$1,500.00	\$3,000.00
Project Coordination - AWG		\$2,000.00	\$2,000.00	\$4,000.00
Partner Involvement	\$200.00	\$900.00	\$900.00	\$2,000.00
				\$0.00
				\$0.00
Total Other Contributions:	\$1,200.00	\$8,900.00	\$8,900.00	\$19,000.00

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application - CEQA

CEQA Documentation – Document 1 of 2

CEQA/NEPA Compliance Form - Attached as document 2 of 2

CEQA

The only additional regulatory requirement for this project is compliance with the CEQA. Since the project is on USFS land, it was not foreseen to need a CEQA document until this Sierra Nevada Conservancy grant opportunity arose. Alpine County will be the lead agency for CEQA. An initial study and mitigated negative declaration as required by CEQA is targeted for completion in September, with circulation for comment and review complete in October, and approval by the Board of Supervisors expected by early November. Alpine County anticipates using the Environmental Assessment prepared in accordance with the NEPA as a template for the CEQA documents. Pursuant to AB 52, Alpine County has already submitted the Local Government Tribal Consultation List Request to the Native American Heritage Commission.

Appendix F - CEQA/NEPA Compliance Form

(California Environmental Quality Act & National Environmental Policy Act)

Instructions: All applicants must complete the CEQA compliance section. Check the box that describes the CEQA status of the proposed project. You must also complete the documentation component and submit any surveys, and/or reports that support the checked CEQA status.

If NEPA is applicable to your project, you must complete the NEPA section in addition to the CEQA section. Check the box that describes the NEPA status of the proposed project. Submit any surveys, and/or reports that support the NEPA status. For both CEQA and NEPA, submittal of permits is only necessary if they contain conditions providing information regarding potential environmental impacts.

NOTE: Effective July 1, 2015, AB52 compliance is required.

CEQA STATUS

(All applicants must complete this section)

Check the box that corresponds with the CEQA compliance for your project. The proposed action is either Categorical Exempt from CEQA, requires a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report per CEQA.

Categorical Exemption or Statutory Exemption

If a project is exempt from CEQA, all applicants, including public agencies that provide a filed Notice of Exemption, are required to provide a clear and comprehensive description of the physical attributes of the project site, including potential and known special-status species and habitat, in order for the SNC to make a determination that the project is exempt. A particular project that ordinarily would fall under a specific category of exemption may require further CEQA review due to individual circumstances, i.e., it is within a sensitive location, has a cumulative impact, has a significant effect on the environment, is within a scenic highway, impacts an historical resource, or is on a hazardous waste site. Potential cultural/archaeological resources must be noted, but do not need to be specifically listed or mapped at the time of application submittal. Backup data informing the exemption decision, such as biological surveys, Cultural Information Center requests, research papers, etc. should accompany the full application. Applicants anticipating the SNC to file an exemption should conduct the appropriate surveys and submit an information request to an office of the California Historical Resources Information System (CHRIS).

1. Describe how your project complies with the requirements for claiming a Categorical or Statutory Exemption per CEQA:

2. If your organization is a state or local governmental agency, submit a signed, approved Notice of Exemption (NOE) documenting the use of the Categorical Exemption or Statutory Exemption, along with any permits, surveys, and/or reports that have been completed to support this CEQA status. The Notice of Exemption must bear a date stamp to show that it has been filed with the State Clearinghouse and/or County Clerk, as required by CEQA.
3. If your organization is a nonprofit, there is no other California public agency having discretionary authority over your project, and you would like the SNC to prepare a NOE for your project, let us know that and list any permits, surveys, and/or reports that have been completed to support the CEQA status. All supplementary documentation must be provided to the SNC before the NOE can be prepared.

-
- Negative Declaration OR**
 Mitigated Negative Declaration

If a project requires a Negative Declaration or Mitigated Negative Declaration, then applicants must work with a qualified public agency, i.e., one that has discretionary authority over project approval or permitting, to complete the CEQA process.

1. Describe how your project complies with the requirements for the use of a Negative Declaration or a Mitigated Negative Declaration per CEQA:

2. Submit the approved Initial Study and Negative Declaration/Mitigated Negative Declaration along with any Mitigation Monitoring or Reporting Plans, permits, surveys, and/or reports that have been completed to support this CEQA status. The IS/ND/MND must be accompanied by a signed, approved Notice of Determination, which must bear a date stamp to show that it has been filed with the State Clearinghouse and/or County Clerk, as required by CEQA.

Environmental Impact Report

If a project requires an Environmental Impact Report, then applicants must work with a qualified public agency, i.e., one that has discretionary authority over project approval or permitting, to complete the CEQA process.

1. Describe how your project complies with the requirements for the use of an Environmental Impact Report per CEQA:

2. Submit the Draft and Final Environmental Impact Report along with any Mitigation Monitoring or Reporting Plans, permits, surveys, and/or reports that have been completed to support this CEQA status. The EIR documentation must be accompanied by a signed, approved Notice of Determination, which must bear a date stamp to show that it has been filed with the State Clearinghouse and/or County Clerk, as required by CEQA.
-

NEPA STATUS

Check the box that corresponds with the NEPA compliance for your project.

Categorical Exclusion

Submit the signed, approved Decision Memo and Categorical Exclusion, as well as documentation to support the Categorical Exclusion, including any permits, surveys, and/or reports that have been completed to support this NEPA status.

Environmental Assessment & Finding of No Significant Impact

Submit the signed, approved Environmental Assessment and Finding of No Significant Impact along with any permits, surveys, and/or reports that have been completed to support this NEPA status.

Environmental Impact Statement

Submit the Draft and approved, Final Environmental Impact Statement, along with the Record of Decision and any permits, surveys, and/or reports that have been completed to support this NEPA status.

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application - NEPA

NEPA Documentation – Document 1 of 3

CEQA/NEPA Compliance Form - Attached under CEQA documents (CEQA 2 of 2)

NEPA

The Environmental Assessment for the 1,200 acre Markleevillage Fuels Reduction Project (document attached as NEPA 2 of 3) was completed in August 2014. The Decision Notice/Finding of No Significant Impact was issued in September 2010 (document attached as NEPA 3 of 3).

The resource specialist reports, which disclose the full analysis of the direct, indirect, and cumulative effects, are incorporated by reference and are available in the project file, located at the Carson Ranger District office.



United States
Department of
Agriculture

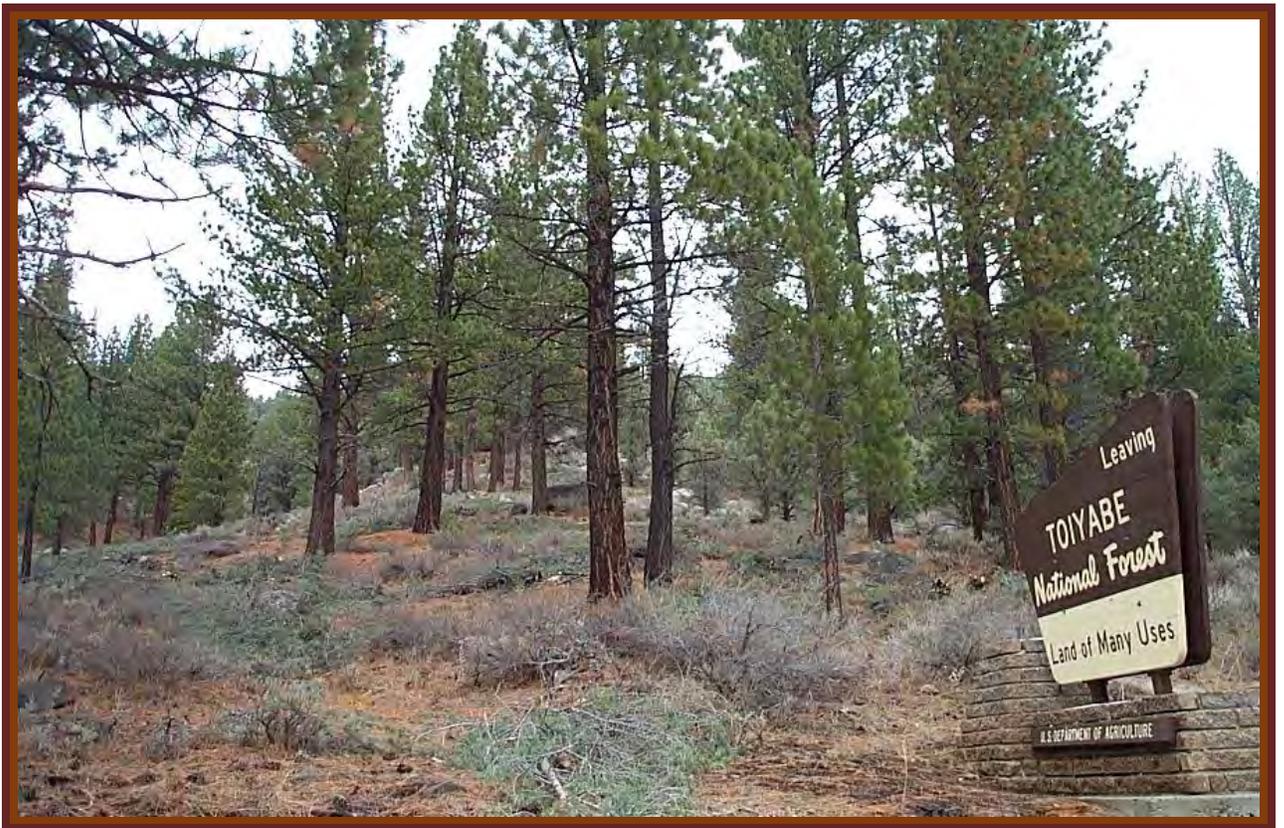
Forest Service
Intermountain
Region

August 2010

Environmental Assessment

Markleevillage Fuels Reduction Project

Humboldt-Toiyabe National Forest
Carson Ranger District
Alpine County, California



A Healthy Forest Restoration Act Project

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CHAPTER 1

PURPOSE AND NEED

INTRODUCTION

The Healthy Forest Restoration Act of 2003 (HFRA) was signed into law on December 3, 2003. The purpose of the HFRA is in part to: (A) reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects; (B) enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape and; (C) protect, restore, and enhance forest ecosystem components, promoting the recovery of threatened and endangered species to improve biological diversity and enhance productivity and carbon sequestration (HR 1904).

The Markleevillage Fuels Reduction analysis was completed under HFRA (USDA DOI 2004). This project is an authorized hazardous fuels reduction project in accordance with the HFRA because: (i) the project is located on Federal lands within a wildland urban interface (WUI) area of an at-risk community and (ii) the project is being conducted under sections 103 and 104 of the HFRA.

The Markleevillage project area encompasses approximately 1,200 acres, is located on the Carson Ranger District of the Humboldt-Toiyabe National Forest, and is adjacent to Markleeville, California, an at-risk community. The Alpine County Community Fire Plan (Alpine Fire Safe Council 2007) recommends a more aggressive approach to fuels treatment and reduction on US Forest Service lands.

The elevation of the project area ranges from 5,700 to 6,500 feet. The legal description for the project area is Township 10 North, Range 20 East, sections 19, 20, 29, 30, 31, and 32 and Township 10 North, Range 19 East, sections 23 and 24, Mount Diablo Meridian. Figure 1-1 is a vicinity map of the project area.

Figure 1-1. Vicinity map



Within the previous 30 years, multiple vegetation and hazardous fuels reduction decision documents have been completed and projects implemented within the Markleevillage project area. Approximately 90 percent of the project area has received some sort of treatment in the past 30 years. Table 1-1 describes the National Environmental Policy Act (NEPA) decision document name and the year signed, along with the name of any associated implementation projects. Some of these decisions were wholly implemented; others may have only been partially completed. The Markleevillage fuels reduction project integrates these past projects into one project, wholly implementing partially completed projects, providing for treatment on previously untreated areas and maintaining the entire project area. Figure 1-2 displays the areas previously treated and what the type of treatment it was; some of the treatments overlay each other with the same area having received multiple treatments.

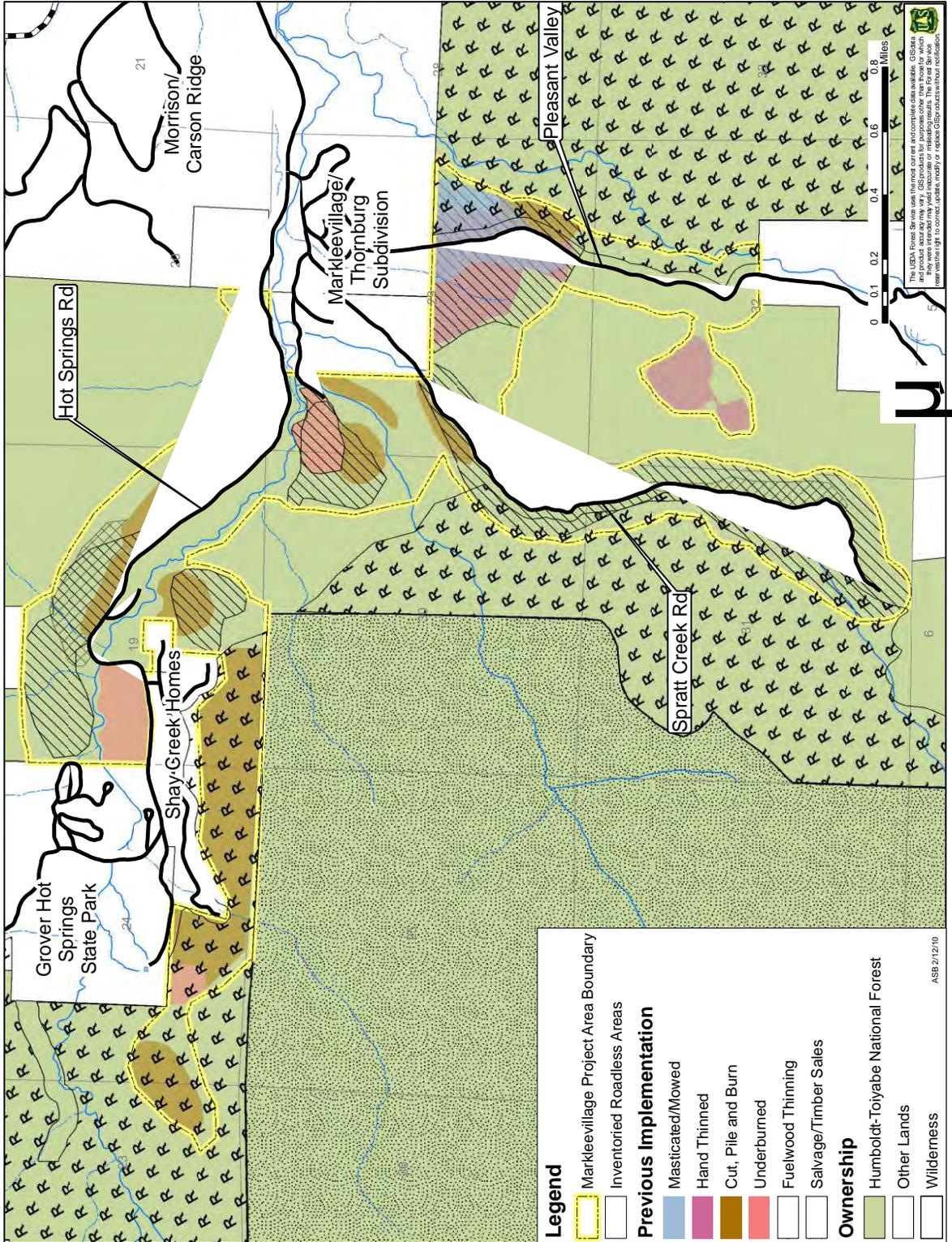
Table 1-1. NEPA decision documents within the project area and year signed.

Decision Document Name	Year Signed	Associated Project
Hot Springs Fuelbreak	2003	Hot Springs Project
North Shay Fuelbreak	2001	North Shay Project
Carson District Thinning	2000	Plantation Thinning
Markleeville Unit 1 Prescribed Fire	1999	Alpine Fuelbreak
Grover Hot Spring-Poor Boy Vegetative Management Project Supplement	1992	Musser-Jarvis Sale
Grover Hot Spring-Poor Boy Vegetative Management Project	1990	Alpine Salvage and Fritz/Resolution Sales
Pleasant Valley Insect & Disease Thinning Project	1983	Pleasant Spratt Timber Sale

Hazardous fuels reduction projects have also been implemented on private, State and Bureau of Land Management properties adjacent to the Markleevillage project area.

Approximately 313 acres or 26 percent of the project is within an inventoried roadless area (IRA). Figure 1-2 displays the IRA around the project area. The 2001 Roadless Area Final Rule (36 CFR 294) allows cutting, selling or removing of generally small diameter timber in an inventoried roadless area in limited circumstances. Circumstances that apply in this area include: (A) Maintenance or restoration of characteristics of ecosystem composition and structure to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period. (B) Cutting, sale, or removal of timber is needed and appropriate for personal or administrative use. (C) The roadless characteristics have been substantially altered in a portion of the IRA due to the construction of a classified road and subsequent timber harvest. Both must have occurred after the area was designated as an IRA and prior to January 12, 2001. The Regional Forester reviewed the Markleevillage Fuels Reduction Project for consistency with the Department of Agriculture roadless area directives. On July 20, 2010, the Regional Forester concurred that the project complies with the directives and subsequent waivers and that the project could proceed.

Figure 1-2. Previous treatments and inventoried roadless areas within the project area.



PURPOSE AND NEED

The purpose and need for this project includes:

- Provide for and maintain a reduced wildland fire hazard by reducing fuel loading and ladder fuels in forested and shrub areas around the Shay Creek, Markleevillage, Thornburg and Carson Ridge subdivisions, as well as Grover Hot Springs State Park.
- Improve watershed conditions and protect municipal watersheds from adverse effects of wildland fire on soil and water quality.
- Maintain conditions to reflect more natural or historical fire regimes.
- Provide and maintain defensible areas for firefighters to manage future wildland fires.

This action responds to the goals and objectives outlined in the Toiyabe National Forest Land and Resource Management Plan (USDA 1986), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004), and helps move the project area towards desired conditions described in those plans.

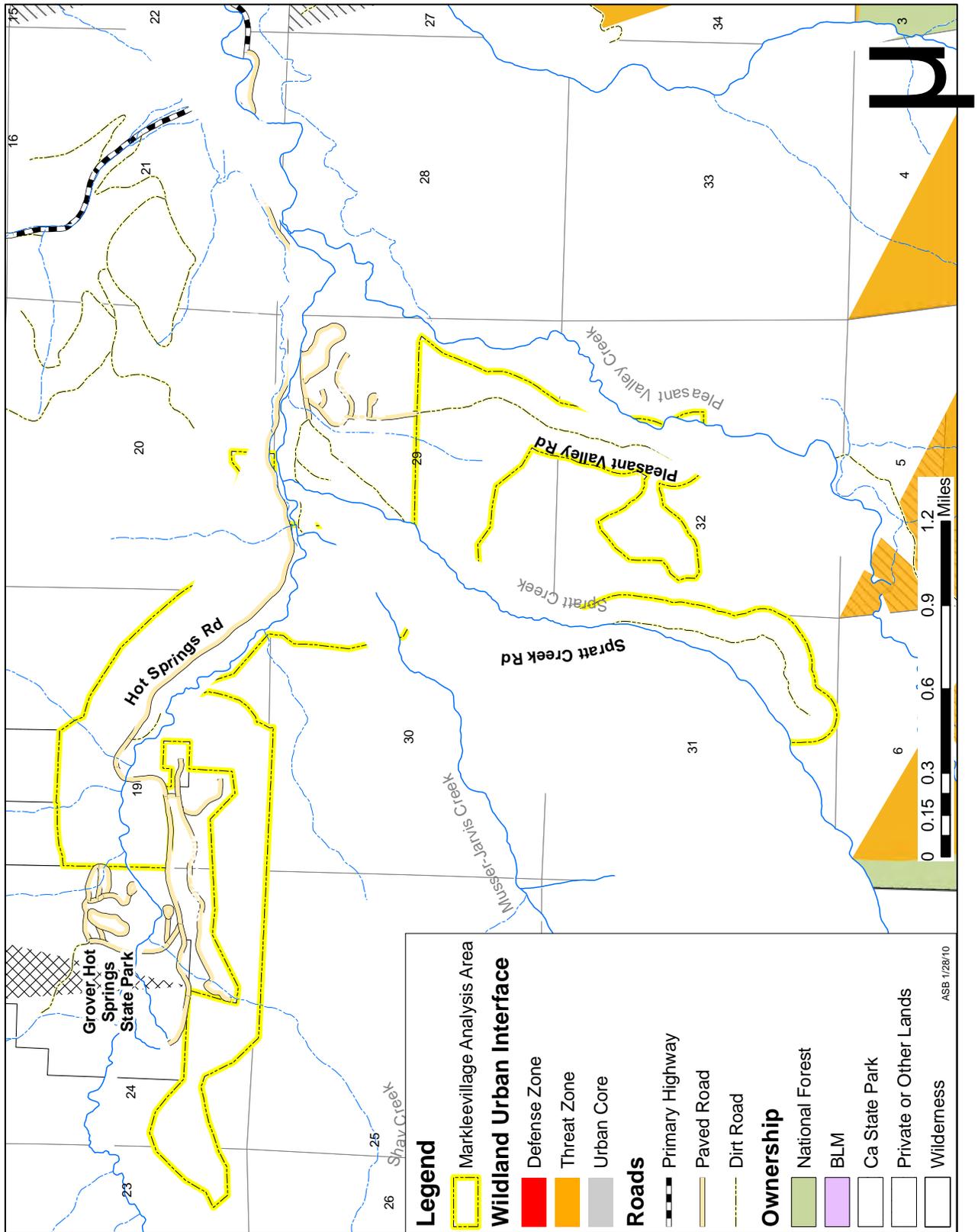
MANAGEMENT DIRECTION AND GUIDANCE

The Markleevillage Fuels Reduction Project is proposed at this time to respond to goals and objectives of the National Fire Plan (USDA DOI 2000) and the Toiyabe National Forest Land and Resource Management Plan (USDA 1986), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004).

The project area is located within Management Area #3 – Alpine, as identified in the Toiyabe National Forest Land and Resource Management Plan (1986). Key resource values in the Alpine area are developed and dispersed recreation, wildlife, aesthetics, and watershed. Fire prevention and protection will be emphasized with other agencies and local governments to maintain key resource values. Vegetation management will be conducted to enhance watershed, range, wildlife, aesthetic and vegetative vigor; and to minimize the potential for catastrophic wildfire, and insect and disease infestations.

The project area is located within the general forest within the threat and defense zones of the WUI. Desired conditions, management intent and management objectives from the Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision (January 2004) have been incorporated into the Proposed Action. Figure 1-3 depicts the WUI zones.

Figure 1-3. WUI defense and threat zones.



The Proposed Action

Our proposal is to treat approximately 1,200 acres; some areas would receive multiple treatments, such as thinning and underburning.

The Forest Service proposes to meet the purpose and need within the Markleevillage Project area by implementing the following proposed actions:

Conifer Thinning. On approximately 750 acres trees would be thinned from below, favoring fir species, western dwarf mistletoe (*Arceuthobium campylopodum*) infected and insect infested trees for removal. This treatment would involve thinning from below by generally removing smaller trees that are most susceptible to wildfire and leaving the dominant tallest trees that are less susceptible to fire. On most of the 750 acres, tree thinning would be incidental and consist of removing insect infested trees, understory trees and/or minor thinning. Most of the trees removed would be smaller diameter trees, though trees up to 24” diameter at breast height (dbh) may be removed, especially if successfully attacked by bark beetles or infested with dwarf mistletoe. Signs of successful bark beetle attack include boring dust around ≥ 50 percent of the circumference of the base of the tree and/or pitch tubes with boring dust and frass in the resin.

Trees would be removed by hand thinning and piling and utilizing fuelwood permits and contracts.

Brush and Incidental Small Tree Thinning. Shrub and small trees densities would be reduced throughout the 1,200 acre project area. Treatment methods would include mastication/mowing, hand cutting, piling, and/or chipping.

Prescribed Fire. On approximately 1,200 acres, prescribed fire may be utilized to reduce shrub and small diameter trees densities, remove ladder fuels and reduce fuels buildup. Prescribed fire would include underburning and pile burning and would most likely occur after mechanical treatments are completed.

PUBLIC INVOLVEMENT AND COLLABORATION

The Forest Service used multiple methods to develop the proposed action and determine the major issues that would affect the decision on this project. The Forest Service involved members of the public, interested private groups, and State, County and local agencies, including:

Collaboration with the Alpine Fire Safe Council.

Publication of a Notice of Proposed Action/Scoping Notice in the Reno Gazette Journal on February 23, 2010.

Listing of the project in the Schedule of Proposed Actions (SOPA), published quarterly by the Humboldt-Toiyabe National beginning in January 2010.

Holding a public open house collaboration meeting at Turtle Rock Park in Markleeville California to present, review and revise the project on March 10th, 2010.

Mailing of the Notice of Proposed Action/Scoping Notice to 195 interested individuals and adjacent landowners on February 23, 2010.

COMMENTS RECEIVED DURING SCOPING

A Forest Service interdisciplinary (ID) team identified issues to be addressed in developing alternatives for this area based on input received from the ID team, adjacent landowners, interested members of the public and collaboration meetings with Alpine Fire Safe Council. Comments received during scoping and responses to the comments are located in Appendix A.

ISSUES

The following issues were identified from public comments, consultation and interdisciplinary team analysis. These issues were incorporated into the proposed action and design features.

- Effects of treatments on reducing fuel loading and wildland fire risk, including maintenance of treated areas.
- Short and long term impacts and benefits to wildlife and wildlife habitat.
- Potential for noxious/invasive weed introduction and/or spread.
- Potential effects on heritage resources.
- Potential impacts to watersheds, water quality and soils.

DECISION NEEDED

The decision needed from the Humboldt-Toiyabe National, Carson Ranger District Ranger, the responsible official, is whether to implement this project to meet the management direction as stated in the Forest Plan and reduce hazardous fuels and maintain a reduced wildland fire risk in the Markleevillage project area.

CHAPTER 2 PROPOSED ACTION

INTRODUCTION

This chapter describes the proposed action developed by the interdisciplinary team in response to the issues identified. The team followed the alternative analysis procedure found under Section 104 of the HFRA.

PROPOSED ACTION/NON-COMMERCIAL FUNDING ALTERNATIVE

The proposed action is designed to reduce forest fuel loading in the Markleevillage project area. Existing roads would be utilized to implement this project; no new roads would be constructed. This alternative is the non-commercial funding alternative required by the November 3, 2009 Remedy Ruling by Judge England regarding the 2004 Framework (Sierra Nevada Forest Plan Amendment). This is a non-commercial alternative because the only material removed would be for fuelwood. All treatments would be accomplished using a mix of Forest Service crews and permits or contracts. Slash resulting from the proposed action would be a) shredded in the masticated areas; b) lopped and scattered in areas proposed for underburning; c) piled and burned in areas where underburning is not feasible, but pile burning is; and d) lopped and scattered and left on site in inaccessible areas where pile burning is not feasible and a long-term increased fuels hazard isn't created. Figure 2-1 depicts the proposed action.

The Forest Service proposes to meet the purpose and need within the Markleevillage Project area by implementing the following proposed actions:

Conifer Thinning. On approximately 750 acres trees would be thinned from below, favoring fir species, mistletoe infected and insect infested trees for removal. This treatment would involve thinning from below by generally removing smaller trees that are most susceptible to wildfire and leaving the dominant tallest trees that are less susceptible to fire. On most of the 750 acres, tree thinning would be incidental and consist of removing insect infested trees, understory trees and/or minor thinning. Most of the trees removed would be smaller diameter trees, though trees up to 24" dbh may be removed, especially if successfully attacked by bark beetles or mistletoe infected. Signs of successful bark beetle attack include boring dust around ≥ 50 percent of the circumference of the base of the tree and/or pitch tubes with boring dust and frass in the resin.

Trees would be removed utilizing fuelwood permits and contracts, hand crews and mastication equipment.

Generally trees in the suppressed and intermediate crown classes would be removed, though some trees in the co-dominant crown class would be removed. The majority of

trees targeted for removal would be the smaller diameter trees that are competing with mature overstory trees or with more vigorous trees in the same canopy layers.

Generally the largest and most vigorous trees would be retained; the exception to this would be in areas successfully infested with bark beetles.

Brush and Incidental Small Tree Thinning. Shrub and small trees densities would be reduced throughout the 1,200 acre project area. Treatment methods would include mastication/mowing, hand cutting, piling, and/or chipping.

Prescribed Fire. On approximately 1,200 acres, prescribed fire may be utilized to reduce shrub and small diameter trees densities and reduce fuels. Prescribed fire would include underburning and pile burning and would most likely occur after mechanical treatments are completed.

Maintenance. Maintenance would be required in the treated areas to maintain more open conditions. Without maintenance conifer and brush regeneration would eventually put the stand at a risk from insect, disease, high severity wildland fire and competition related mortality. Maintenance may include mastication, piling and burning, additional thinning, or underburning.

DESIGN FEATURES

Fire/Fuels

- All Federal, State and local regulations pertaining to prescribed burning would be followed. A Region 4 approved burn plan would be completed and followed.
- A news release would be distributed to media contacts and the general public contacted prior to the burning season to notify the local community of the prescribed burning.

Archeology

- Archeological sites would be flagged and avoided during project implementation.
- Trees would be directionally felled away from identified archeological sites.
- No slash piles would occur in identified archeological sites, any slash within site boundaries would be removed by hand.

Wildlife/Sensitive Plants

- Where available, three of the largest snags per acre would be retained.
- Large woody debris would be retained, at least 3 pieces per acre, greater than 12" dbh or the largest available.
- Mastication/mowing of brush and small trees would occur after July 15 to reduce impacts to nesting migratory birds.
- Any treatment within Northern goshawk and/or California spotted owl protected activity centers would be subject to a limited operating period and modified prescription based on Forest Plan standards and guidelines.

Soils/Hydrology

- Native seed mix would be used during project rehabilitation efforts.
- Generally, ground based equipment would operate on slopes less than 35 percent (30 percent on decomposed granite soils), except for pitches of 150 feet or less. However, ground based operations may occur on slopes up to 50 percent; these would be designed on a unit by unit basis only after soil stability, soil rock content and the location of the steep slope in relation to the remaining portions of the treatment unit have been determined to be appropriate by the Forest Service.
- No trees would be removed where they provide stream bank stability.
- Projects would comply with conditions in Lahontan Water Quality Control Board timber harvest waivers.
- Pile burning would be minimized in riparian conservation areas.
- Ground-based equipment would stay on established stream crossings

Air Quality

- Prescribed fires are subject to permitting by the Great Basin Unified Air Pollution Control District (GBUAPCD). For each prescribed fire, the Forest Service would have contingency plans identified to reduce smoke emissions. Contingency plans shall be implemented when the GBUAPCD determines that acceptance limits of smoke are exceeded, and/or the Forest Service anticipated that the prescription for a prescribed fire would be exceeded.

Noxious Weeds

- To remove any soil and debris that may harbor noxious weed seed, contract Equipment would be washed and inspected prior to entering National Forest System lands.
- When seeding is required, seed would be tested as weed free.
- Any new infestations of noxious weeds would be documented and locations marked. New sites would be treated by hand pulling or lopping.

Vegetation

- Retain all trees greater than 24” dbh, except where removal is necessary for operational safety.

MONITORING

This project would use an adaptive management approach, where the treatments are implemented, monitored and adapted. Monitoring would determine if the desired conditions are being met. Adjustments to project prescriptions based on monitoring within the general scope of the proposed action analyzed in this document would not need a new decision. Any adjustments outside the scope of the proposed action would likely require a new decision. Monitoring actions would include those discussed in Table 2-1.

Table 2-1. Monitoring Actions.

Action	Method	Timing
Evaluate the effectiveness of tree and fuels treatments in meeting resource objectives	Photo points	Pre and post project activities
Evaluate burning conditions, fuel consumption and fire effectiveness	Observations during and after burns	During and post burn
Ensure archeological sites are not impacted	Field visits	Pre, during and post activity
Ensure permits and contracts are in compliance.	Field visits and inspections	During and post activities
Meet the California Regional Water Quality Control Board Lahontan Region conditional waiver of waste discharge requirements.	Submit appropriate timber harvest waiver	Pre and post activities

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CHAPTER 3

AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES

ANALYSIS QUALIFICATION

This chapter provides a summary of the key environmental effects of the proposed action as described in the specialist reports prepared for this project. The analysis and conclusion about the potential effects are synopsisized and cited in the respective resource sections. The resource specialist reports, which disclose the full analysis of the direct, indirect, and cumulative effects, are incorporated by reference and are available in the project file, located at the Carson Ranger District office.

Each resource area discloses the direct, indirect, and cumulative effects for that resource area. The National Environmental Policy Act defines these as:

Direct – effects which are caused by the action and occur at the same time and place.

Indirect – effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

Cumulative – impacts that result from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

The past, present and reasonably foreseeable future actions include:

- Comstock logging in the late 1800's.
- Fire suppression throughout the 20th century to present day.
- Previous fuels reduction and forest health improvement projects on Federal lands.
- Personal use Christmas tree and fuelwood sales, expected to continue in future years.
- Private land development including new homes.
- Recreational use – primarily hiking, camping, picnicking, horseback riding, mountain biking, OHV use, cross-county skiing and snowmobile use.
- Hazardous fuels reduction projects completed and planned on private lands.

Because this project is being prepared under the HFRA, and is within the WUI, the no-action alternative was not developed. However, an understanding of what would occur should no-action be taken is important in gaining an understanding of the effects of the proposed action.

FIRE/FUELS

Affected Environment

Fire is a naturally occurring event in the arid mountains of this project location. The proximity of the Sierra Nevada Range to the desert basins creates atmospheric disturbance leading to

Potential fire behavior can be estimated for a given location from topographic, weather, and fuels information. Historic weather observations for the period of 1964 to 2009 were used to estimate fuel moisture conditions and major fire weather influences using the *Fire Family Plus* program, version 4.0.2. The database includes manual observations from 1964 to 2003 and automated observations from the Markleeville Remote Automated Weather Station (RAWS) from 2003 through 2009. Table 3-1 displays the weather and fuels conditions used to calculate the fire behavior and effects.

Table 3-1. Weather and fuels conditions used to calculate potential fire behavior and effects

Fire Weather Conditions	Wind mph	Max Temp (deg F)	Live Herb (%)	Live Woody (%)	0 – 0.25“ Dead (%)	0.025 -1” Dead (%)	1 – 3” Dead (%)	3” + Dead (%)
Low	11.7	52	45	113	12.7	16.3	17.8	20.9
Moderate	9.6	76	56.6	84.2	4.2	6.0	9.7	11.4
High	6.9	90	30.3	60	2.4	2.9	5.2	5.8
Extreme	7.0	94	30	60	1.9	2.4	4.3	5.0

These locally observed weather observations and the fuel moisture conditions were entered into *FlamMap* version 3.0, developed by Finney, Brittan, & Seli and sponsored by the Joint Fire Sciences Program, Rocky Mountain Research Station. This program combines local weather with topographic and vegetation data to predict fire behavior across a landscape. The output map layers show potential fire behavior at a resolution of 30 meters, reflecting the changes in vegetation and topography under fixed weather and fuel moisture conditions. Fuel moisture conditions are used in the calculations, rather than weather observations alone, because they indicate cumulative effects of weather factors on the vegetation or fuel including those prior to the time of the fire. LANDFIRE remotely sensed data using fire behavior fuel models (Scott and Burgan 2005) represented the vegetation across the project landscape.

Fire behavior projections were modeled for three weather and fuel condition scenarios, high, moderate, and low. Under the Sierra Nevada Forest Plan Amendment (USDA 2004) the desired condition within the WUI threat zone is flame lengths at the head of a fire of less than four feet under high fire weather conditions through treatment of vegetation. The high fire weather conditions in table 3-1 depict the average of these weather conditions, which can be expected to occur approximately seven percent of the year. The moderate weather scenario reflects the average through most of the year; 75 percent. The low scenario represents conditions during only 15 percent and this is also typical of the conditions under which prescribed burning is conducted. The extreme conditions in the table represent circumstances which occur less than three percent of the time; however similar circumstances are present during the development of many large wildfires in the area.

Flame length is an observable index of fire behavior that summarizes the interaction of fuel and weather conditions. Flame length is also directly related to fireline intensity and is a key indicator of a fire's resistance to fire suppression efforts. The four foot flame lengths selected as desirable within the WUI threat zone are generally seen as manageable by firefighters without the support of much equipment or aircraft. This represents a relatively safe working environment for firefighters in the event of a wildfire. Figure 3-2 shows the distribution of flame lengths across the landscape for the High Fire Weather scenario, and also depicts the distribution through the WUI zones.

In addition to the desirability of maintaining flame lengths of four feet or less within the WUI threat zone, the Sierra Nevada Forest Plan Amendment (USDA 2004), also identifies the desired conditions of fairly open tree stands dominated primarily by larger, fire tolerant trees with openness and discontinuity of the crown fuels, both horizontally and vertically, resulting in a very low probability of sustained crown fire. Figure 3-3 shows the potential for crown fire activity with the current vegetation, under high fire weather conditions; these were generated with *FlamMap*. Within the project area, under these conditions, most fires would most likely remain on the surface with limited areas; approximately 13 percent of total project area would be able to sustain passive crown fire or touching. Active crown fire is not predicted under these conditions, but is likely to occur under extreme fire weather conditions in areas with sufficiently dense tree crowns.

It is important to note that both intense surface fires and passive crown fires pose threats to community and firefighter safety and can cause tree mortality. Increasing the gap between surface and crown fuels is necessary to prevent crown fire initiation and can be accomplished both by treating surface fuels and raising the canopy base height of the trees. Canopy base height is the average height from the ground to lower level of the tree canopy of a stand. Crown bulk density is a measure of the density of the tree canopy. Reducing the crown bulk density below the 0.10 kg m^{-3} is generally recommended to prevent active crown fire from spreading through the tree canopy if crown fire becomes established (Scott & Reinhart 2001, Graham et al. 2004).

Figure 3-3. FlamMap generated potential for crown fire activity with the current vegetation under the high fire weather scenario.

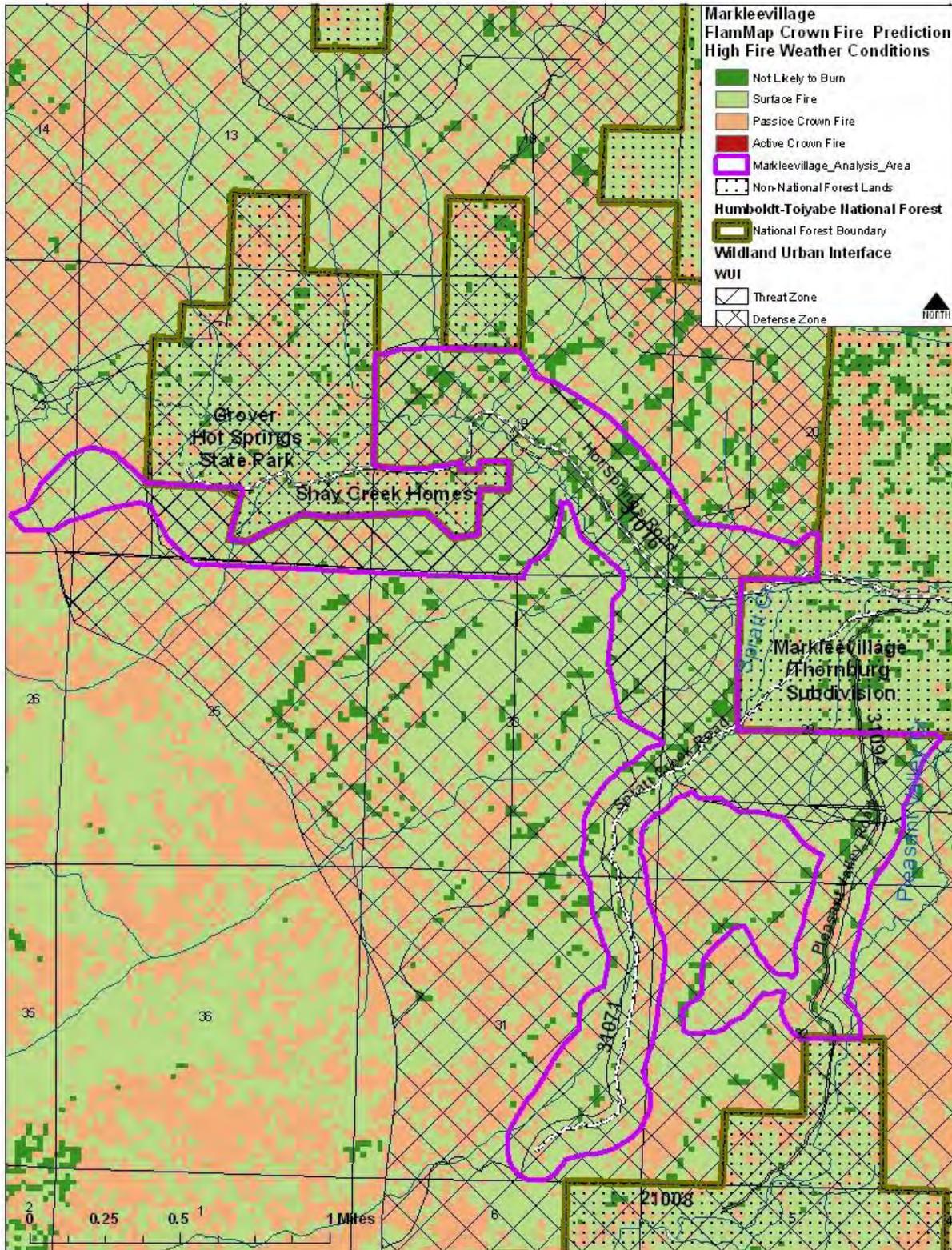


Table 3-2 displays a comparison of the flame lengths projected by *FlamMap* for fire weather scenarios within the WUI zones. The acreage figures are modeled projections that give a general idea of fire behavior in the project area under current conditions. Because the projections were modeled at a 30-meter resolution only the larger continuous blocks of similar fire behavior show up in the outputs; the acreage figures in table 3-2 should be considered minimum treatment areas. As the vegetation continues to grow through the 10 year life of the project additional areas will begin to show fire behavior potential that exceeds acceptable limits for WUI.

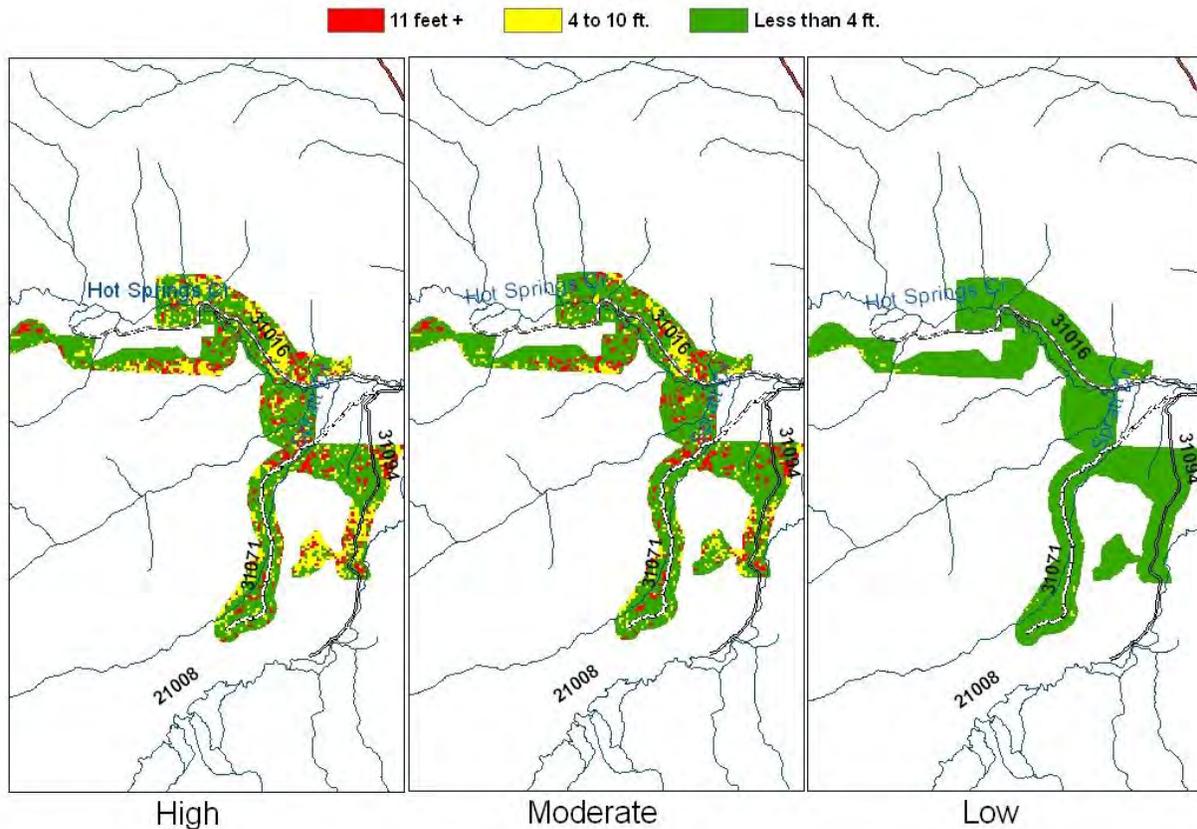
The acreage figures showing flame lengths of four feet and greater in the high fire weather scenario indicates the approximate area needing treatment to create the desired fire behavior conditions within the WUI zones. The areas showing flame lengths of four feet and greater will be most likely to need treatments before they can be maintained using prescribed fire. Other areas also require pretreatment. The acreage figures for the moderate and low scenarios give an indication of the relative differences in fire behavior under these less severe conditions.

Table 3-2. Comparison of flame lengths projected by *FlamMap*.

Fire Weather	High			Moderate			Low		
	All WUI acres	Defense acres	Threat acres	All WUI acres	Defense acres	Threat acres	All WUI acres	Defense acres	Threat acres
WUI Zone									
Flame length									
Less than 4 ft	767	504	263	888	571	317	1181	761	420
4 - 10 feet	269	157	112	158	94	65	9	4	5
11 ft & greater	154	104	50	144	100	44			
Total	1190	765	425	1190	765	425	1190	765	425

The degree to which pre-treatment measures must be taken will depend on the weather and fuel conditions during the time of the burning. Burn plans will be developed to determine the conditions under which burning will take place. These will be determined primarily by operational safety requirements and ability to meet project objectives. Figure 3-4 depicts potential fire behavior represented by flame lengths across the landscape under the three fire behavior scenarios modeled and is a visual summary of the figures presented in table 3-2. This projection demonstrates how the lower fire behavior expected during the portion of the year in which prescribed fire is conducted compares to the expected fire behavior during the remainder of the year.

Figure 3-4. Flame lengths projected by *FlamMap* under a range of fire weather conditions



Environmental Consequences

Direct and Indirect Effects: The proposed action will reduce surface fuels, ladder fuels, and decrease the stand density. These fuel modifications will decrease the likelihood of undesirable fire behavior within the WUI zones. Implementation will take place over ten or more years and will require regular maintenance to meet fire behavior objectives within the WUI. Once initial fuel loading is reduced in areas showing the potential for undesirably high fire behavior, much of the project area can be maintained through the use of prescribed fire restoring the low intensity frequent fire that is typical of the majority fire regime.

Cumulative Effects: The treatments proposed in this project combined with past Forest Service projects, the work of the fire safe councils, and local agencies within the communities will contribute to reducing the probability of large scale severe fire in the project area impacting the communities and creating undesirable ecological impacts.

VEGETATION

Affected Environment

The present forest developed under conditions unique to the last 150 years, which strongly influenced its structure and species composition. Early influences of grazing, timber harvest, abundant precipitation and suppression of wildfires played a strong role in shaping the vegetation that exists today.

Conifer stands, with interspaced shrub fields, are the predominant vegetation within the project area. On National Forest System lands within the project area 71 percent of the cover is comprised of conifer vegetation, 24 percent is shrub cover, three percent is herbaceous cover (grasses and forbs), and two percent is aspen.

Within the conifer cover, approximately 85 percent is comprised of Jeffrey (*Pinus jeffreyi*) or eastside pine (Jeffrey and ponderosa (*Pinus ponderosa*)); 13 percent is comprised of mixed conifer/fir, one percent is comprised of white fir (*Abies concolor*), and the remaining one percent is comprised of singleleaf pinyon pine (*Pinus monophylla*). Tree densities within the conifer areas area currently range from scattered, open trees to basal areas around 200 square feet per acre.

Within the shrub cover, approximately 31 percent is comprised of bitterbrush-sagebrush, 28 percent is comprised of big basin sagebrush, 14 percent is comprised of bitterbrush, 11 percent is comprised of great basin mixed shrub, 11 percent is comprised of great basin or upper montane mixed chaparral, three percent is comprised of greenleaf manzanita and the remaining two percent is comprised of willow.

Many acres within the project area have received tree and brush density reduction treatments in the past 30 years. These treatments varied by project and included thinning trees to 80 square feet of basal area per acre, creating fuelbreaks, thinning trees and shrubs, removing ladder fuels, thinning plantation trees, removing dead, dying and insect attacked trees, reducing brush densities and removing concentrations of dead down material. These projects were implemented through timber/salvage sales, fuelwood cutting, hand crews cutting, piling and burning, mowing, chipping and prescribed understory fire.

Bark beetles have been active in this area at various levels in the area since the early 1990's. Within the project area, Jeffrey pine beetle (*Dendroctonus jeffreyi*) are the primary bark beetles that attack Jeffrey pine, the fir engraver beetle (*Scolytus ventralis*) are the primary bark beetles that attack white fir and the mountain pine beetle (*Dendroctonus ponderosae*) are the primary bark beetles that attack lodgepole and ponderosa pine . Pine engraver beetles (*Ips pini*) and (*Ips confusus*) have increasingly been causing pine mortality from untreated green slash. Data from the 2009 aerial insect and disease detection survey indicates Jeffrey pine and fir engraver beetle are active within the project area with five attack centers of one to fourteen trees at each location. Stand examination data, collected from relatively small areas in 2010, indicates some areas with higher basal areas (around 200 square feet per acre) have a moderate bark beetle risk rating.

Western dwarf mistletoe is present within the project area; this obligate parasite affects the growth, form and survival of trees and reduces their competitive status and reproductive fitness (USDA 2002). Stand examination data indicates that when present, the average dwarf mistletoe rating is two; indicating a low to moderate infection rate.

Approximately 94 percent of the project area is within a grazing allotment. The Dressler cattle and horse allotment occupies approximately 12 percent of the project area near the South end of the project on Pleasant Valley Road and is currently active. The Hot Springs cattle and horse allotment, which occupies approximately 82 percent of the project area, is currently closed and not grazed.

Environmental Consequences

Direct and Indirect Effects: Implementation of the proposed action would not dramatically alter the vegetation species composition in the project area. It would affect the structure of the vegetation with the removal of surface and ladder fuels and thinning trees up to 24" dbh. Tree species composition would be maintained or restored to reflect more historic conditions with somewhat increased Jeffrey pine densities and reduced white fir densities, especially in the understory. Long-term sustainability of treated timber stands and resiliency to natural disturbances would improve and stand structures would be maintained or restored to be more representative of historic conditions. Thinning from below (also called low thinning) mimics mortality caused by inter-tree competition or surface fires and concentrates site growth potential on the dominant trees (Graham et al. 1999). Residual basal areas will range from scattered open grown trees to approximately 120 square feet of basal area per acre.

Trees infected with dwarf mistletoe would be a priority for removal; in some areas trees infected with dwarf mistletoe are dominant trees and/or over 24" dbh and would remain. Smaller pine infected with dwarf mistletoe would be removed, however with an overstory presence of mistletoe remaining; this project would not have a significant effect on dwarf mistletoe reductions.

Areas that were previously treated would have incidental trees thinned to maintain basal areas, and ladder fuels and brush thinned. Areas that were not previously treated would be thinned to 80 to 120 square feet of basal area.

Figure 3-5 displays an example of an area that would require initial treatment. Figure 3-6 displays an example of an area that would require maintenance.

Figure 3-5. Example of an area requiring initial treatment of tree and brush thinning.



Figure 3-6. Example of an area requiring maintenance.



Previous large stand replacing wildfires in the Markleeville/Woodfords area have resulted in some of the forested areas being replaced with early seral shrub species. Without the occurrence of thinning treatments and maintenance, stand densities would increase, thereby increasing the risk of bark beetle and density related mortality. With no treatment, the effectiveness of previous treatments would be lost and the risk of a stand replacing wildfire would increase.

Cumulative Effects: With this project, approximately 1,200 acres would receive treatment over a ten year period, including maintenance and initial treatments. Past and proposed treatments on private lands include hazardous fuels reduction projects and watershed improvements. Past and proposed treatments on public lands include wildland fire, conifer and brush thinning, prescribed fires, salvage and timber sales, and personal use Christmas tree and fuelwood removal. These treatments on private and public lands would generally reduce the risk of wildland fire, improve forest vigor and move the area toward more desired conditions.

AIR QUALITY

The existing sources of particulate emissions within and/or near the Markleevillage project area include smoke from neighboring prescribed fire projects, residential wood stoves, and vehicular exhaust and dust.

Affected Environment

All of the project area falls within Alpine County, California. This counties air quality is monitored and enforced by the Great Basin Air Quality Management District.

Environmental Consequences

Direct and Indirect Effects: Air Quality would be affected primarily by prescribed fire operations such as pile burning and/or understory burning following pretreatments of an area. Prescribed fires are subject to permitting by the Great Basin Air Quality Management District. For each prescribed fire, the Forest Service will have contingency plans identified to reduce smoke emissions. Contingency plans shall be implemented when the Great Basin Air Quality Management District determines that acceptable limits of smoke are exceeded, and/or the Forest

Service anticipates that the prescription for a prescribed fire would be exceeded. Given these conditions, it is unlikely that health risks from air quality would occur. However smoke generated from prescribed burning cannot be prevented and would likely be an annoyance to some individuals in local neighborhoods as well as to travelers through the area. The Carson Ranger District would work with other National Forests, the Bureau of Land Management, and local fire departments to ensure that multiple prescribed burns would not exceed air quality standards.

In the absence of hazardous fuels reduction treatments, a high severity wildland fire may be likely. This would cause short term adverse air quality impacts from smoke emissions. The Angora Fire, which charred 3,100 acres near South Lake Tahoe in 2007, released an estimated 141,000 ton(e)s of greenhouse gases and the decay of the trees killed by the fire could bring the total emissions to 518,000 ton(e) s. This is equivalent to the greenhouse gas emissions generated annually by 105,500 cars (Malmsheimer et al. 2008).

Cumulative Effects: With the application of design features, there are no foreseen cumulative effects to air quality.

HERITAGE RESOURCES

Affected Environment

A total of ten known archaeological sites are present within the proposed project area. These sites range from prehistoric lithic scatters and bedrock mortar sites to historic logging camp sites and ditches. These sites remain unevaluated for inclusion into the National Register of Historic Places. These sites would be flagged and avoided in compliance with 36 CFR Part 800 of the National Historic Preservation Act. The Carson Ranger District consulted with the Reno-Sparks Indian Colony and Washoe Tribe of Nevada and California during separate consultation meetings with the tribal chairpersons (March 17 and 16, 2010 respectively). The tribes support the Markleevillage fuels reduction project.

Environmental Consequences

Direct and Indirect Effects: The proposed action has the potential to affect ten known archaeological sites. All ten of the sites have been identified within the areas of proposed ground disturbing activities. All of the sites would be flagged to delineate site boundaries prior to any ground disturbing activities. If previously unknown sites are encountered during project activities, operations in that area would stop and the district archaeologist would be contacted. Potential indirect effects include the increased potential for looting and vandalism to cultural resources because of more visibility.

Without treatments, the risk of a high severity stand replacing fire is higher; this would allow the continued exposure of important archaeological resources to damage and destruction by catastrophic wildland fires and may constitute an adverse effect on these resources.

Cumulative Effects: No cumulative effects are anticipated, as impacts to the sites would be mitigated by avoiding the sites.

WILDLIFE/SENSITIVE PLANTS

Affected Environment

Federally Listed Threatened or Endangered Species

Informal consultation to date includes a written request to the United States Fish and Wildlife Service (USFWS), as required in 50 CFR 402.12(c), for a list of threatened, endangered, and proposed species known or likely to occur in the project area. The list was requested on July 9th, 2010 and to date has not been received. Based on literature review and local knowledge of the area, it is assumed there are no threatened, endangered, or proposed species that occur in the project area. Once received, the USFWS species list will be reviewed to assure agreement with this assumption. Any changes will be reflected in the Decision Notice/Finding of No Significant Impact.

Forest Service Sensitive Species

According to the biological evaluation written for this project, the project area provides potential habitat for the following wildlife and plant species listed as sensitive in Region Four: Northern goshawk, California spotted owl, flammulated owl, great gray owl, white-headed woodpecker, mountain quail, upswept, slender, and dainty moonwort.

Northern goshawks and spotted owls are both known to nest within and adjacent to Grover's Hot Springs State Park. Protected activity centers (PACs) have been designated for both species in the general area, protecting approximately 500 acres of nesting and fledging habitat. Surveys have been conducted annually for both species in this area since 2002. A single great gray owl was observed in 1979 by the State Park Ranger in the Grover's Hot Springs area (CDFG 2003).

Management Indicator Species

Management indicator species (MIS) are identified in the Toiyabe National Forest Land and Resource Management Plan as representing a group of species having similar habitat requirements (USDA 1986). MIS are not federally listed as threatened, endangered, or Forest Service sensitive but have the potential to be affected by project activities. A review was conducted to determine: 1) if the project is within the range of any MIS, 2) if habitat is present within the proposed project area, and 3) if there are potential direct, indirect or cumulative effects on habitat components. MIS associated with habitats that may be affected by the project are analyzed below.

The following MIS were selected for analysis for the Markleeville Fuels Reduction project due to the presence of suitable habitat for these species that may be impacted by the project: Mule deer, American marten, yellow warbler, yellow-rumped warbler, hairy woodpecker, Williamson's sapsucker, northern goshawk, and macroinvertebrates.

The following species were not selected for further analysis due to absence of habitat or because the project would not directly or indirectly affect the habitat: Palmer's chipmunk, sagegrouse, Lahontan cutthroat trout, and Paiute cutthroat trout.

Environmental Consequences

Federally Threatened, Endangered, and Proposed Species

The project area is not known to contain habitat for any threatened, endangered or proposed species. Therefore no further analysis will be conducted for these species.

Forest Service Sensitive Species

Northern goshawks and California spotted owls are known to nest in portions of the project area near Grover's Hot Springs State Park. Any treatment within the PACS would be subject to a limited operating period (LOP) and modified treatment prescription based on Sierra Nevada Forest Plan Amendment Standards and Guidelines (USDA 2004). Suitable habitat is also present for flammulated owls, white-headed woodpeckers, mountain quail, dainty moonwort, upswept moonwort, and slender moonwort. Specific plant surveys for moonworts have not been conducted in the project area and therefore their presence is unknown. However, moonworts are generally associated with wet, grassy areas which are not included in most of the project area. Implementation of the proposed project may impact the above listed species by disturbing breeding and foraging activities and/or disturbing habitat. However these impacts are expected to be minor, would only impact individuals, and would not lead to a trend toward Federal listing (biological evaluation, located in the project file at the Carson Ranger District). Furthermore, maintaining reduced fuel loading in these areas would help reduce the potential for a catastrophic wildfire and subsequent loss of wildlife habitat.

Management Indicator Species (MIS) and Migratory Birds

The project area contains habitat for mule deer, American marten, yellow warbler, yellow-rumped warbler, hairy woodpecker, Williamson's sapsucker, northern goshawks and macro-invertebrates. The project area also contains habitat for several migratory songbirds associated with conifer, shrub and riparian habitat types. The proposed project includes thinning and mastication/mowing in areas that have mostly had past fuels treatments and therefore is expected to have limited and very minor impacts on MIS and/or migratory birds. Under the proposed action, mastication of brush and small diameter trees would occur only during the fall to avoid the migratory bird season and at least three snags per acre and down, large woody debris would be retained for wildlife habitat. Furthermore, maintaining reduced fuel loading in these areas would help reduce the potential for a catastrophic wildfire and subsequent loss of wildlife habitat. Therefore the proposed project would not affect habitat or lead to a downward trend in populations of the above listed MIS species (in project file at Carson Ranger District).

NOXIOUS/INVASIVE WEEDS

Affected Environment

Forest Service Manual 2081.02 and the Sierra Nevada Forest Plan Amendment (USDA 2004) require a noxious weed assessment be conducted when any ground disturbing actions or activities are proposed to determine the risk of introducing or spreading noxious weeds. For projects having moderate to high risk of introducing or spreading noxious weeds, the project decision document must identify noxious weed control measures that must be undertaken during project implementation. Noxious weeds are defined in FSM 2080.5 as "those plant species designated as noxious weeds by the Secretary of Agriculture or by the responsible State official. The objective of this weed risk assessment is to evaluate each risk factor, including all the proposed actions, for their potential to introduce and/or expand noxious weeds and other invasive species into the Markleeville Project area. Factors that influence the spread of weeds and the level of risk for the project area include the following:

1. Presence of weeds in and adjacent to the project area (low risk)

The project area has been surveyed for noxious weeds. A small population of tall white-top and (*Lepidium latifolium*) and bull thistle (*Cirsium vulgare*) are known to occur adjacent to Forest

Service Lands at Grover's Hot Springs State Park on California State Park lands. These infestations have been treated for numerous years by hand pulling and herbicide application. To date, only minor infestations of cheatgrass (*Bromus tectorum*) have been documented in the Markleevillage project area on National Forest System lands. Cheatgrass is widespread on other parts of the Carson Ranger District where it has established itself as a minor component in many plant communities.

2. Habitat vulnerability (low risk)

Much of the proposed project includes thinning of trees and shrubs, most which were previously thinned five to thirty years ago. All treatments would adhere to the weed prevention strategy discussed above. Furthermore, because the majority of vegetation in these areas is composed of native species the risk for noxious weed spread and/or invasion is considered minimal.

3. Vectors unrelated to the proposed project (low risk)

Weeds are most commonly vectored along roadways. Under the proposed action no new roads would be constructed which would help minimize the risk of noxious weed spread. Project equipment using existing roads would be required to be cleaned to insure it is free of soil, seeds, vegetative matter or other debris before entering National Forest system lands. The equipment would also be cleaned prior to moving from an infested treatment unit, to a unit that is free of such weeds.

4. Habitat alteration expected as a result of the project (low-moderate risk)

As mentioned above, the project includes thinning of trees and brush, mostly in areas that were previously treated. In areas where mastication is proposed, mulch layers would minimize the risk of cheatgrass germination. However, if mulch layers are more than 2-3 inches deep, natives may also be inhibited. These sites would likely need to be seeded in the future with native grasses. Risks from equipment introducing weed seeds would be reduced because of the equipment-cleaning requirement.

5. Increased vectors as a result of project implementation (low risk)

Project induced vectors include primarily vehicles, including heavy equipment, associated with the project. Again, adherence to the weed prevention strategy, including assuring all equipment entering the project site has been properly cleaned, would significantly reduce the potential for project related vectors to enter the project area. To the extent that vectored seeds actually result in weed establishment on roadsides and disturbed sites such as landings, these areas would be immediately treated by hand pulling or grubbing. These sites would continue to be monitored for several years post-treatment to assure no new infestations occur.

6. Mitigation measures (low risk)

Measures are included in the proposed action that would reduce the likelihood of weed introduction into the project area, these include: hand pulling and lopping treatments for any new infestations discovered during implementation, post treatment surveys in the vicinity of known weed infestations and areas of potentially new infestations, and adhering to project design features.

To the degree that measures such as those noted above are successfully utilized, the likelihood of invasive species becoming a significant problem in the project area is considered low.

Environmental Consequences

The proposed action provides a low risk for introducing or enhancing new or existing weed populations. Design features built into the proposed action reduce opportunities for weed spread and expansion. Information gained from monitoring this and other projects is expected to further our knowledge on local weed ecology thus enabling us to better predict how Forest Service management activities influence the introduction and spread of weeds.

WATER/SOILS

Affected Environment

This project lies within the Pleasant Valley Creek and Hot Springs Creek hydrologic unit code (HUC) 6 watersheds. These two streams join to form Markleeville Creek, a tributary to the East Carson River. The Hot Springs Creek watershed includes Shay Creek, Musser Jarvis Creek, and Spratt Creek. Annual precipitation ranges from approximately 20 inches in Markleeville to 47 inches at the higher elevations. (WRCC 2010) Most of this precipitation comes as snow between October and May. This area also occasionally receives mid-winter rain on snow events and severe summer thunderstorms, which can result in heavy runoff. Flooding occurs on a regular basis. These events often result in landslide, debris flows and erosion of roads and streambanks (CWSD 2007).

The Alpine Watershed Group began to gather water quality data throughout the Upper Carson River Watershed in 2004. Citizen monitors have collected data quarterly on eight sites, including sampling stations on Hot Springs Creek in Grover Hot Springs Campground and Markleeville Creek below the project area. Monitoring parameters include water temperature, pH, conductivity, dissolved oxygen (DO), turbidity and E Coli. The data analysis for all sites indicates that the water chemistry parameters (temperature, pH, conductivity & DO) are within normal ranges for cold mountain streams. Turbidity values generally fell within acceptable ranges for aquatic life tolerances with the exception of two recordings during higher flows. E coli values, with the exception of Millberry Creek, did not exceed water quality standards set by the Lahontan Water Quality Control Board (Katopthis 2008). The East Fork of the Carson River in California, Markleeville Creek, and the tributaries within the project area are not currently on the California 303(d) List of Water Quality Limited Segments (LRWQCB 2006).

A stream corridor condition assessment for the Upper Carson River watershed was completed in 2004. This study was conducted by MACTEC Engineering for the Alpine Watershed Group and the Sierra Nevada Alliance (MACTEC et al. 2004). The project goal was to assess the condition of and provide information for future restoration efforts on the Carson River and its tributaries. Markleeville Creek was included in this study. The study concluded that the reach of Markleeville Creek above the town of Markleeville was impacted by a water diversion and the lack of large woody material. The reach of Markleeville/Hot Springs Creek near Grover Hot Springs is in good condition (MACTEC et al. 2004).

Soils in the project area are derived from volcanic parent material. The East Carson River watershed is characterized by steep slopes and channels that are incised into volcanic material. These volcanic soils tend to be highly erosive (CWSD 2007). MACTEC Engineering used geology and slope gradient to assess relative erodability in the Upper Carson River watershed. The results show areas of high erosion potential along steeper portions of Pleasant Valley Creek and Spratt Creek, both tributaries to Markleeville Creek (MACTEC et al. 2004). However, much of the Markleeville Creek watershed is not within areas of high erosion potential.

Environmental Consequences

Direct and Indirect Effects: The use of ground-based equipment for thinning trees and masticating brush, and the use of prescribed fire can have impacts on soil and water quality. The direct and indirect effects of these actions can include soil disturbance and erosion, soil compaction, increased runoff, and sediment delivery to stream channels. The risk of impacts to soil and water would be reduced through implementation of Best Management Practices (BMPs). The water and soils measures are designed to minimize soil disturbance and protect stream channels and riparian areas. These measures include equipment exclusion zones near streams and slope limitations for equipment.

Direct and indirect effects from prescribed burning on soils and water quality can include loss of ground cover, increased erosion and runoff, increased water temperature and increased sediment delivery to stream channels (USDA 2005). The effects of fire on soil and water depend on fire severity and frequency, and on soil and site properties. Prescribed burns are designed to be low or moderate severity and generally burn in a mosaic pattern so that not all the vegetation is consumed. Riparian areas would be ignited on the outside edge so that the prescribed fire can back into the riparian vegetation towards the stream.

Pile burning, which concentrates heat on a smaller area, can have a greater effect on soil fertility and soil biota than broadcast burning. Although the severe heating under the piles are damaging to the soil, only a small percentage of the total area may be affected (USDA 2005). Pile burning in riparian areas would be limited.

The proposed action includes hand thinning trees, masticating small trees and brush, and prescribed underburning and pile burning. These activities would take place over a number of years and could be done throughout most of the 1,200 project area.

The effects to soil and water from masticating are minimal because the equipment operates over vegetation and leaves behind a layer of mulch. UC Davis and Integrated Environmental Restoration Services conducted a study on the West Shore of Lake Tahoe in 2004 to determine the effects of masticating equipment on soil compaction, runoff and erosion. The results of this study indicate that erosion effects from mastication are slight to insignificant when a layer of woodchip mulch is left on the ground surface (Hatchett et al. 2006).

Prescribed fire, including both broadcast and pile burning, could occur on up to 1200 acres, though it is likely that not all of this acreage would be suitable for burning. In addition, this burning would be spread out over a number of years. It is likely that some impacts to soil and water quality would occur from prescribed burning. Implementation of the project design features would lessen these impacts. It is anticipated that in the long term water quality and soil quality would be maintained.

If no action is taken it is assumed that all or part of this area would burn as a wildfire. High severity wildfires can remove much of the vegetation, along with duff and litter from the forest floor. Wildfires are usually more severe than prescribed fire and, as a result, they are more likely to produce significant effects on soil and water quality. Following wildfires, flood peak flows can increase substantially, affecting stream physical conditions, aquatic habitat and human health and safety (USDA 2005). Soil erosion would likely increase, along with streambank erosion from increased flows.

Cumulative Effects: Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions. Past, present and future activities and natural disturbances in a watershed can contribute to sediment delivery to streams, resulting in degradation of water quality and aquatic habitat. Cumulative effects were analyzed using the equivalent roaded area (ERA) method developed by the U.S. Forest Service Region 5 (USDA 1990). When utilizing the ERA model, all landscape disturbances are evaluated in comparison to a completely impervious, or roaded, surface. Road surfaces are considered to represent maximum hydrologic disturbance and rainfall-runoff potential.

The present actions assessed in this cumulative watershed effects (CWE) analysis include prescribed burning, brush mastication, and roads and trails. In addition, residential areas within the watersheds and the Grover Hot Springs State Park campground were also considered. These components are assigned disturbance coefficients that represent a typical ratio of their hydrologic impact compared to the same roaded area. Past actions included in the CWE analysis were previous timber sales and mastication projects. The ERA model includes a recovery factor over time. Burned areas typically recover faster than areas of timber harvest. The Plumas National Forest has used a 25 year recovery for timber harvest and five years for wildfire (USDA 2008).

Two subwatersheds were delineated for analysis of cumulative watershed effects. The Spratt Creek subwatershed includes Spratt Creek, Musser and Jarvis Creek, and short reach of Hot Springs Creek and an unnamed intermittent tributary north of Hot Springs Creek. This subwatershed is 5,400 acres. The Hot Springs Creek subwatershed includes Shay Creek, Sawmill Creek, Buck Creek, a reach of Hot Springs Creek and several unnamed intermittent tributaries. A small part of the project area along Pleasant Valley Creek was not included in this CWE analysis.

Threshold of Concern: Watershed sensitivity is an estimate of a watershed's natural ability to tolerate land use impacts without increasing the risk of cumulative impacts to unacceptably high levels. Measures used to evaluate watershed sensitivity for individual watersheds included the potential for 1) soil erosion, 2) high intensity and/or long duration precipitation events, including rain-on-snow, 3) landslides and debris flows and 4) channel erosion within alluvial stream channels (USDA 1990).

Watershed response to elevated levels of ground disturbance may begin to negatively impact downstream channel stability and water quality. To describe the level of disturbance when such impacts may begin to occur, upper estimates of watershed "tolerance" to land use may be established based on basin-specific experience, comparison with similar basins, and modeling of watershed response. These indices of tolerable levels of disturbance are called thresholds of concern (TOC). The tolerance of a watershed is used to determine acceptable levels of disturbance and prescribe mitigation measures to prevent detrimental responses. The TOC does not represent an exact level of disturbance above which cumulative watershed effects would occur. Rather, it serves as a "yellow flag" indicator of increased risk of adverse cumulative effects occurring within a watershed. Thresholds of concern have not been determined for watersheds on the Carson Ranger District. However, National Forests in the Sierra's generally use TOC values that range from 10 to 14 percent of a watershed (USDA 1990).

The results of the CWE analysis indicate that the ERA for both watersheds is approximately four percent. This ERA is well below the threshold of 10 percent described above. Based on this analysis it can be assumed that the cumulative effects from this project would be minimal.

VISUAL RESOURCES

Affected Environment

A Visual Quality Objective (VQO) is a resource management objective that reflects the desired level of visual quality based on the physical characteristics and social concern for the area. Five categories of VQO's are commonly used: maximum modification, modification, retention, partial retention and preservation.

- Maximum modification permits a dominant change to the original landscape, particularly in the foreground and middle-ground.
- Modification allows alterations to dominate the original characteristic landscape. However, alterations must borrow from natural line and form to such an extent and on such a scale that they are comparable to natural occurrences. The activities may be visually dominant but must conform to the natural character of the landscape in the fore- and middle-ground.
- Partial retention requires that alterations remain visually subordinate to the characteristic landscape. Repetition of the line, form, color and texture is important to ensure a blending with the dominant elements. Requires that activities be visually subordinate to the natural character of the landscape.
- Retention requires that management activities or alterations not be visually apparent. The goal is to repeat the line, form, color and texture of the characteristic landscape. Requires that the activities are not visually evident and the landscape retains a natural appearance.
- Preservation requires that no visible change occur in the landscape from forest development practices.

Distance zones used in VQO designations include: a) foreground – defined as within 0.5 miles of the observer; b) middle ground – defined as the distance between 0.5 and 3 miles; and c) background – defined as the distance beyond the middle ground.

The majority of the project area is viewed by forest visitors and vehicle occupants driving along Hot Springs, Spratt Creek or Pleasant Valley Roads. Portions of the project area can also be viewed by local residents and visitors to the forest and Grover Hot Springs State Park.

Based on the Toiyabe National Forest Land and Resource Management Plan VQO's (USDA 1986), approximately 57 percent of the project area is located within partial retention and 43 percent is located within modification. Because of the project's close proximity to roads, the project area is located within the fore and middle ground distance zones.

Numerous alterations occur within the project that deviate the area from a natural appearance. Natural alterations include fire scars and insect infestations. Human alterations include the obvious areas of planted trees (plantations), previous fuels reduction and forest health improvement projects, utility corridors, roads, trails, and a summer residence.

Environmental Consequences

Direct and Indirect Effects: Overall, the maintained reduction in fuels would enhance visual objectives in the area by maintaining the reduced risk of a stand replacing wildland fire. In areas where brush and small tree mastication or cutting occurs, some un-natural lines would be evident and adversely affect visual quality in the short term, but would have long term positive impacts. Feathering tree and brush densities from lighter to heavier treatments would assist with reducing adverse impacts. In areas where prescribed burning occurs, short term adverse impacts would be related to smoke and a charred landscape. This would be short term in nature and the long term impacts would be positive. With no treatments, the risk of a wildland fire would increase and scenic integrity would be degraded due to charred, dead trees on the landscape.

Cumulative Effects: Past, present and reasonably foreseeable future actions that may have a cumulative effect on visuals include existing roads and their maintenance, hazardous fuels reduction projects on Forest Service and private lands, as well as private residences and developments adjacent to the Forest Service. Hazardous fuels reduction projects on the various jurisdictions may have short term adverse impacts, but would provide long term positive impacts due to the reduced risk of a high severity wildland fire. The proposed action would have a positive cumulative impact by maintaining a vegetated condition.

TRANSPORTATION SYSTEM

Affected Environment

In 2008, the Carson Ranger district published a motor vehicle use map; this map identifies roads, trails and areas designated for motor vehicle use and also identifies other public roads (MVUM 2008). There are approximately five miles of designated roads within the project area. These roads, along with the length in the project area and their status are displayed in table 3-3.

Table 3-3. Existing roads within the project area.

Road #	Road Name	Length Within Project Area (miles)	Jurisdiction	Current Status
31071	Spratt Creek Road	1.9	Forest Service	Open
31094	Pleasant Valley Road	1.1	County	Open
31016	Hot Springs Road	1.8	County	Open
31016A	Hot Springs Road Spur	.59	Forest Service	Open

Environmental Consequences

Direct/Indirect Effects. The Markleevillage Fuels Reduction project makes no road management decisions for those roads that would be used by the project. No new roads would be constructed and no roads would be decommissioned. The result would no net gain or loss in open road densities. Routes used for removal of fuelwood would include Hot Springs Road, Pleasant Valley Road and Spratt Creek Road. Portions of the project area have been within previous fuelwood removal areas; therefore average daily traffic volume is not expected to significantly increase.

Cumulative Effects: Access for timber and firewood harvest and westward expansion began in the 1850's. Users created roads; some declined in condition from non-use and are now non-existent, while others are now major vehicle routes.

Potential road closures as part of Motor Vehicle Use Map may occur in the future. This project would have no effect on this; this project proposes to use roads identified as open or administrative use or non Forest System roads such Hot Springs and Pleasant Valley roads. The proposed action would have no adverse cumulative impacts to the transportation system or open road densities.

RECREATION

Affected Environment

The project area is located adjacent to Markleeville, California, a popular summer and winter recreational area.

Recreation uses in the project area include opportunities such as dispersed camping, picnicking, hiking, horseback riding, off highway vehicle use, cross-country skiing, snowshoeing and snowmobiling.

There is approximately 500 feet of one designated trail in the project area, this trail is located at the end of Spratt Creek road and leads into the wilderness area. The project is also adjacent to Grover Hot Springs State Park which includes a campground and hot springs.

Environmental Consequences

Direct/Indirect Effects: Direct effects from implementing this project may include temporary closures of dispersed camping areas, and special use permits and group events during project implementation activities. Smoke from prescribed fire operations may enter the dispersed camping areas and recreational areas depending on the timing and location of the prescription. Signing of roads for public safety during project operations would minimize direct effects.

With no action, the risk of a catastrophic wildland fire is increased. Recreational activities would be less desirable if the forest and shrub characteristics of the area were burned down.

The proposed action would help to maintain current recreation opportunities. Existing roads would continue to be open for non-motorized and motorized activities, and trails would continue to be open to hiking and horseback riding. This project would reduce the risk of catastrophic fire that could damage or destroy the forested character that attracts people to this area for the many recreational opportunities.

Cumulative Effects: There are no foreseen cumulative impacts to recreation under the proposed action.

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CHAPTER 4 CONSULTATION WITH OTHERS

The opportunity for public participation in the analysis of this project was initiated through publication in the Schedule of Proposed Actions in 2010. A 30-day public scoping period began on February 25, 2010, with the Notice of Proposed Action/Scoping Information mailed to 195 individuals, organizations or agencies. This document was also available on the World Wide Web at: www.fs.fed.us/r4/htnf. In addition, a public meeting was held on March 10th, 2010.

Federal, State, County and tribal agencies and organizations involved in during the development of this environmental assessment included:

Tribal

Washoe Tribe of Nevada and California
Reno-Sparks Indian Colony

Federal

U.S. Fish and Wildlife Service

State/County

Alpine County Board of Supervisors
California State Parks
California State Historic Preservation Office

Organizations

Alpine Fire Safe Council

WHO MAY FILE AN OBJECTION

Under the regulations of 36 CFR 218.6 governing the Predecisional Administrative Review Process for authorized HFRA projects, only individuals and organizations who submitted specific written comment related to the project may file an objection to the project.

LIST OF PREPARERS

Amanda Brinnand - Forester
Beth Nabors – Fuels Planner
Maureen Easton – Wildlife Biologist
Sally Champion – Hydrologist
Joe Garrotto – Archeologist
Steve Howell – Fuels Specialist

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CHAPTER 5

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APPENDIX A RESPONSE TO COMMENTS

COMMENTS: Jennifer Johnson (Washoe Tribe of Nv and Ca)

Comment: Supports the project as it provides for reduced wildland fire hazard and reduced fuel loadings. Also supports the efforts to reduce the risk to high-intensity wildfire which could have adverse effects on the natural and cultural resources in the area. If artifacts are found, stop work and contact the Washoe Tribe's cultural resource coordinator.

Response: In compliance with federal regulations, operations would stop and the district archaeologist would be contacted if archaeological artifacts are discovered during project implementation. The district archaeologist would keep in contact with the Tribal Historic Preservation Officer to discuss any unanticipated discoveries during project implementation.

COMMENTS: Fritz and Nancy Thornburg

Comment: Supports the project and have been urging the Forest Service to take such as action for many years. Project will improve the forest health of this area and reduce the threat of catastrophic wildland fire.

Response: The proposed action provides for a reduced wildland fire hazard, fuel loading and ladder fuels within the project area by removing ladder fuels. Forest health would be somewhat improved by removal of successfully insect attacked trees and reduced stand densities. Refer to Vegetation Environmental and Fire/Fuels Environmental Consequences in chapter 3.

COMMENTS: Anne Holden (California Regional Water Quality Control Board, Lahontan Region).

Comment: Be aware that in May 2009, the Board adopted Order No. R6T-2009-0029 (the 2009 Timber Waiver). This project would require coverage under the 2009 Timber Waiver before project activities commence.

Response: The Forest Service would comply with Timber Waiver requirements.



United States
Department of
Agriculture

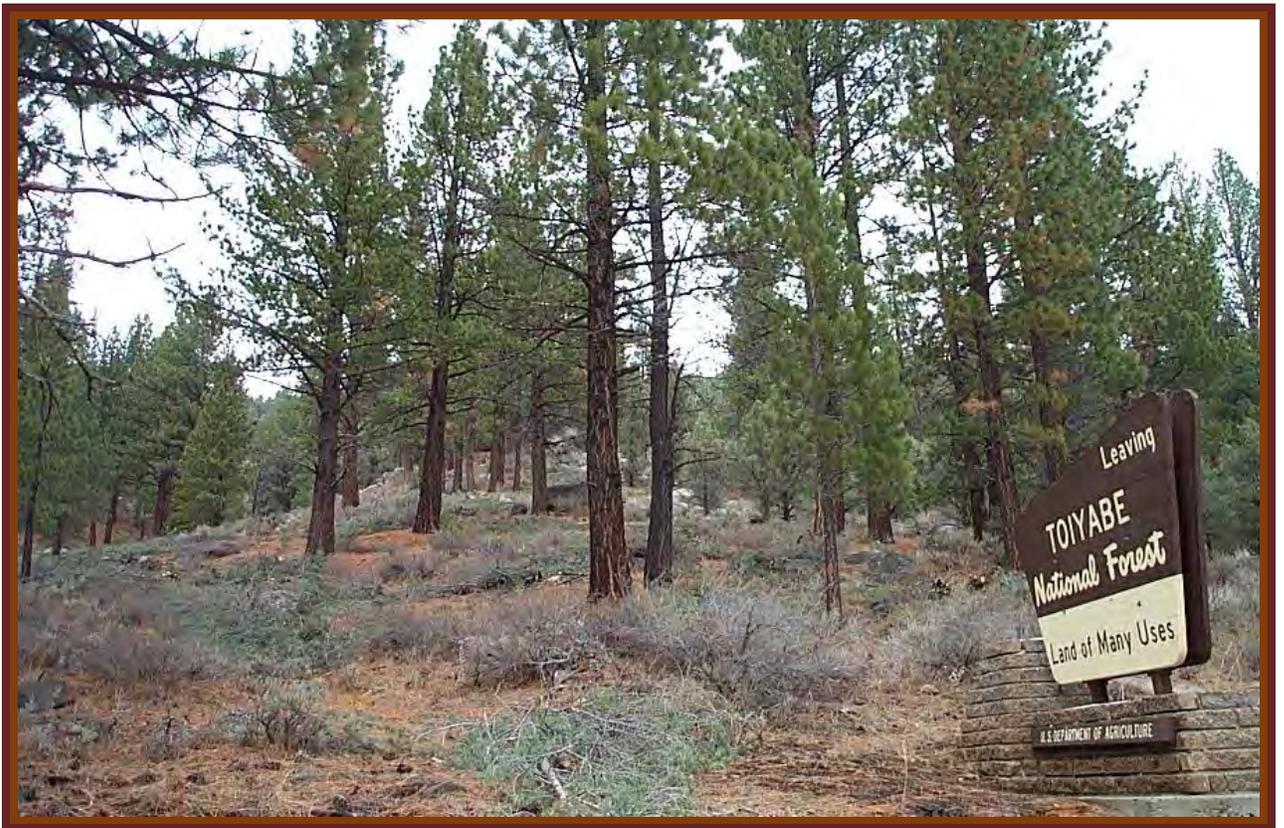
Forest Service
Intermountain
Region

September 30, 2010

Decision Notice/Finding of No Significant Impact

Markleevillage Fuels Reduction Project

Humboldt-Toiyabe National Forest
Carson Ranger District
Alpine County, California



A Healthy Forest Restoration Act Project

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*Markleevillage Fuels Reduction Project
Decision Notice/Finding of No Significant Impact – September 2010*

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DECISION AND REASONS FOR THE DECISION

INTRODUCTION

In August 2010, an Interdisciplinary Team completed the Markleevillage Fuels Reduction Project Environmental Assessment (EA). The EA disclosed the direct, indirect, and cumulative environmental impacts that will result from the proposed action. This EA is available on the Humboldt-Toiyabe National Forest website at: www.fs.fed.us/r4/htnf/projects/#carson.

The Markleevillage Fuels Reduction Project is approximately 1,200 acres in size and is located on the Carson Ranger District of the Humboldt-Toiyabe National Forest. The entire project is within the wildland urban interface (WUI) and within 1 ½ miles of an at-risk community.

The legal description for the project area is Township 10 North, Range 20 East, sections 19, 20, 29, 30, 31, and 32 and Township 10 North, Range 19 East, sections 23 and 24, Mount Diablo Meridian. A vicinity map of the project is located in Appendix A, figure 1.

PURPOSE AND NEED

The purpose and need for this project includes:

- Provide for and maintain a reduced wildland fire hazard by reducing fuel loading and ladder fuels in forested and shrub areas around Markleeville, California, including the subdivisions of Shay Creek, Markleevillage, Thornburg and Carson Ridge, as well as Grover Hot Springs State Park.
- Improve watershed conditions and protect municipal watersheds from adverse effects of wildland fire on soil and water quality.
- Maintain conditions to reflect more natural or historical fire regimes.
- Provide and maintain defensible areas for firefighters to manage future wildland fires.

DECISION

I have decided to implement the proposed action as described in the EA. Minor changes or additions have been made to some design features from the EA, these include:

Fire/Fuels

- All Federal, State and local regulations pertaining to prescribed burning will be followed. A Region 4 approved burn plan will be completed and followed. A smoke permit will be obtained prior to implementing prescribed burning.

Wildlife/Sensitive Plants

- To minimize impacts to nesting migratory birds, a limited operating period will be imposed from April 1st to July 15th. During this period, no mastication/mowing of brush or small trees will be allowed. Prior to prescribed burning activities, surveys for active nests will be completed and any active nests will be flagged and avoided.

Noxious Weeds

- Any new infestations of noxious weeds will be documented and locations marked. New sites will be treated by hand pulling or lopping and bagging.

The Forest Service proposes to meet the purpose and need within the Markleevillage Project area by implementing the following proposed actions:

Existing roads will be utilized to implement this project; no new roads will be constructed. This alternative is the non-commercial funding alternative required by the November 3, 2009 Remedy Ruling by Judge England regarding the 2004 Framework (Sierra Nevada Forest Plan Amendment). This is a non-commercial alternative because the only material removed will be for fuelwood. All treatments will be accomplished using a mix of Forest Service crews and permits or contracts. Slash resulting from the proposed action will be a) shredded in the masticated areas; b) lopped and scattered in areas proposed for underburning; c) piled and burned in areas where underburning is not feasible, but pile burning is; and/or d) lopped and scattered and left on site in inaccessible areas where pile burning is not feasible and a long-term increased fuels hazard isn't created. A map of the proposed action is located in Appendix A, figure 2.

Conifer Thinning. On approximately 750 acres trees will be thinned from below, favoring fir species, mistletoe infected and insect infested trees for removal. This treatment will involve thinning from below by removing generally smaller trees that are most susceptible to wildfire and leaving the dominant tallest trees that are less susceptible to fire. On most of the 750 acres, tree thinning will be incidental and consist of removing insect infested trees, understory trees and/or minor thinning. Most of the trees removed will be smaller diameter trees, though trees up to 24" dbh may be removed, especially if successfully attacked by bark beetles or mistletoe infected. Signs of successful bark beetle attack include boring dust around ≥ 50 percent of the circumference of the base of the tree and/or pitch tubes with boring dust and frass in the resin.

Trees will be removed utilizing fuelwood permits and contracts, hand crews and mastication equipment.

Generally trees in the suppressed and intermediate crown classes will be removed, though some trees in the co-dominant crown class will be removed. The majority of trees targeted for removal will be the smaller diameter trees that are competing with mature overstory trees or with more vigorous trees in the same canopy layers. Generally the largest and most vigorous trees will be retained; the exception to this will be in areas successfully infested with bark beetles.

Brush and Incidental Small Tree Thinning. Shrub and small trees densities will be reduced throughout the 1,200 acre project area. Treatment methods will include mastication/mowing, hand cutting, piling, and/or chipping.

Prescribed Fire. On approximately 1,200 acres, prescribed fire may be utilized to reduce shrub and small diameter trees densities and reduce fuels. Prescribed fire will include underburning and pile burning.

Maintenance. Maintenance will be required in the treated areas to maintain more open conditions. Without maintenance conifer and brush regeneration will eventually put the stand at a risk from insect, disease, high severity wildland fire and competition related mortality. Maintenance may include mastication, piling and burning, additional thinning, or underburning.

DECISION DESIGN FEATURES

Fire/Fuels

- All Federal, State and local regulations pertaining to prescribed burning will be followed. A Region 4 approved burn plan will be completed and followed. A smoke permit will be obtained prior to implementing prescribed burning.
- A news release will be distributed to media contacts and the general public contacted prior to the burning season to notify the local community of the prescribed burning.

Archeology

- Archeological sites will be flagged and avoided during project implementation.
- Trees will be directionally felled away from identified archeological sites.
- No slash piles will occur in identified archeological sites, any slash within site boundaries will be removed by hand.

Wildlife/Sensitive Plants

- Where available, three of the largest snags per acre will be retained.
- Large woody debris will be retained, at least 3 pieces per acre, greater than 12” dbh or the largest available.
- To minimize impacts to nesting migratory birds, a limited operating period will be imposed from April 1st to July 15th. During this period, no mastication/mowing of brush or small trees will be allowed. Prior to prescribed burning activities, surveys for active nests will be completed and any active nests will be flagged and avoided.
- Any treatment within Northern goshawk and/or California spotted owl protected activity centers will be subject to a limited operating period and modified prescription based on Forest Plan standards and guidelines.

Soils/Hydrology

- Native seed mix will be used during project rehabilitation efforts.
- Generally, ground based equipment will operate on slopes less than 35 percent (30 percent on decomposed granite soils), except for pitches of 150 feet or less. However, ground based operations may occur on slopes up to 50 percent; these will be designed on a unit by unit basis only after soil stability, soil rock content and the location of the steep slope in relation to the remaining portions of the treatment unit have been determined to be appropriate by the Forest Service.
- No trees will be removed where they provide stream bank stability.
- Projects will comply with conditions in Lahontan Water Quality Control Board timber harvest waivers.
- Pile burning will be minimized in riparian conservation areas.
- Ground-based equipment will stay on established stream crossings

Air Quality

- Prescribed fires are subject to permitting by the Great Basin Unified Air Pollution Control District (GBUAPCD). For each prescribed fire, the Forest Service will have contingency plans identified to reduce smoke emissions. Contingency plans shall be implemented when the GBUAPCD determines that acceptance limits of smoke are exceeded, and/or the Forest Service anticipates that the prescription for a prescribed fire will be exceeded.

Noxious Weeds

- To remove any soil and debris that may harbor noxious weed seed, contract equipment will be washed and inspected prior to entering National Forest System lands.
- When seeding is required, seed will be tested as weed free.
- Any new infestations of noxious weeds will be documented and locations marked. New sites will be treated by hand pulling or lopping and bagging.

Vegetation

- Retain all trees greater than 24” dbh, except where removal is necessary for operational safety.

MONITORING

This project will use an adaptive management approach, where the treatments are implemented, monitored and adapted. Monitoring will determine if the desired conditions are being met. Adjustments to project prescriptions based on monitoring within the general scope of the proposed action analyzed in this document will not need a new decision. Any adjustments outside the scope of the proposed action will likely require a new decision. Monitoring actions will include those discussed in Table 1.

Table 1. Monitoring Actions.

Action	Method	Timing
Evaluate the effectiveness of tree and fuels treatments in meeting resource objectives	Photo points	Pre and post project activities
Evaluate burning conditions, fuel consumption and fire effectiveness	Observations during and after burns	During and post burn
Ensure archeological sites are not impacted	Field visits	Pre, during and post activity
Ensure permits and contracts are in compliance.	Field visits and inspections	During and post activities
Meet the California Regional Water Quality Control Board Lahontan Region conditional waiver of waste discharge requirements.	Submit appropriate timber harvest waiver	Pre and post activities

DECISION RATIONALE

I am selecting the Proposed Action at this time because:

- I find the project is consistent with the Toiyabe National Forest Land and Resource Management Plan, as amended by the Sierra Nevada Forest Plan Amendment.
- This decision is consistent with the National Forest Management Act of 1976, and the Healthy Forest Restoration Act of 2003.
- Internal issues were considered during the development of the Proposed Action and were attenuated through a combination of project design and the incorporation of design features. Scoping and collaborative comments were analyzed to identify both issues and project alternatives that should be considered. Issues were used to frame the analysis and proposed action in the EA.
- Implementation of the Proposed Action will reduce and maintain a reduced wildland fire hazard by reducing fuel loading and ladder fuels.
- The selected Proposed Action meets the purpose and need by improving watershed conditions and protecting municipal watersheds from adverse effects of uncharacteristic wildland fire on soil and water quality by reducing the risk of loss from uncharacteristic stand replacing wildland fires.
- The selected Proposed Action meets the purpose and need by reflecting more natural or historical fire regimes by reducing trees per acre and vegetation densities, and introduction of prescribed fire.
- The selected Proposed Action meets the purpose and need by providing defensible areas for firefighters to control and/or suppress future wildland fires.

OTHER ALTERNATIVES CONSIDERED

The purpose of the HFRA is in part to: (A) reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects; (B) enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape and; (C) protect, restore, and enhance forest ecosystem components, promoting the recovery of threatened and endangered species to improve biological diversity and enhance productivity and carbon sequestration (HR 1904).

The alternative analysis process for this project was completed under section 104 (d) of HFRA because the project is located on Federal lands within a WUI area within 1 ½ miles of Markleeville, an at-risk community. Section 104 (d) (2) Proposed Agency Action...if an authorized hazardous fuel reduction project proposed to be conducted in the wildland-urban interface is located no further than 1 ½ miles from the boundary of an at-risk community, the Secretary is not required to study, develop, or describe any alternative to the proposed agency action in the environmental assessment or environmental impact statement prepared pursuant to section 102 (2) or the National Environment Policy Act of 1969 (42 U.S.C. 4332(2)).

Pursuant to Section 104 (d) (2) of the Healthy Forest Restoration Act of 2003, no other alternatives were developed. However, the consequences of taking no action were considered in the EA. No additional alternatives were proposed during collaboration or scoping.

PUBLIC INVOLVEMENT AND COLLABORATION

The Forest Service used multiple methods to develop the proposed action and determine the major issues that would affect the decision on this project. The Forest Service involved members of the public, interested private groups, and State, County and local agencies, including:

Collaboration with the Alpine Fire Safe Council.

Publication of a Notice of Proposed Action/Scoping Notice in the Reno Gazette Journal on February 23, 2010.

Listing of the project in the Schedule of Proposed Actions (SOPA), published quarterly by the Humboldt-Toiyabe National beginning in January 2010.

Holding a public open house collaboration meeting at Turtle Rock Park in Markleeville California to present, review and revise the project on March 10th, 2010.

Mailing of the Notice of Proposed Action/Scoping Notice to 195 interested individuals, groups and adjacent landowners on February 23, 2010.

Mailing the Markleevillage Fuels Reduction Project EA to those who commented on the project on August 19, 2010. Mailing a notification the EA was available to 183 individuals, groups, and adjacent landowners on August 19, 2010.

Publication of a Pre-decisional Administrative Review Notice in the Reno Gazette Journal on August 18, 2010.

FINDING OF NO SIGNIFICANT IMPACT

The Markleevillage Fuels Reduction Project Finding of No Significant Impact incorporates by reference the Markleevillage Fuels Reduction Project EA and the associated Project Record. After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. My finding of no significant environmental effects is not biased by the beneficial effects of the action.
2. There will be no significant effects on public health and safety. The project will reduce the risk of health and safety related problems from a severe wildland fire, while managing air quality concerns. A burn plan will also be completed prior to burning; the burn plan will address public safety and air quality during prescribed burning (EA Environmental Consequences – Fire/Fuels (pgs. 3-1 to 3-8) and Air Quality (pgs. 3-11 to 3-12)).
3. There will be no significant effects on unique characteristics of the area. Parklands, prime farmlands, wetlands, wild or scenic rivers or ecologically critical areas are not present within the analysis area. Approximately 313 acres or 26 percent of the project is within an inventoried roadless area (IRA). The Regional Forester reviewed the Markleevillage Fuels Reduction Project for consistency with the Department of Agriculture roadless area directives. On July 20, 2010, the Regional Forester concurred that the project complies with the directives and subsequent waivers and that the project could proceed. This project will help protect that character by reducing the risk of a catastrophic wildland fire and improve the vigor of the existing vegetation (EA Environmental Consequences – Fire/Fuels (pgs. 3-1 to 3-8) and Vegetation (pgs. 3-9 to 3-11)).
4. The effects on the quality of the human environment are not likely to be highly controversial because there is no known scientific controversy over the impacts of the project. Public involvement revealed no scientific controversy over the environment impacts of the project. The effects analysis was based on reviewed scientific studies and analysis. The effects of implementation of this decision on the quality of the human environment are not likely to rise to the level of scientific controversy as defined by the Council of Environmental Quality (EA – Public Involvement and collaboration (pg. 1-7), Environmental Consequences (pgs. 3-1 to 3-21), and Literature Cited (pgs. 5-1 to 5-2)).
5. The Forest Service has considerable experience with the types of activities to be implemented. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk.
6. The action is not likely to establish a precedent for future actions with significant effects, because this action is not unusual in itself and does not represent a decision in principle about future considerations. This project is one of the proposed projects identified on the Carson Ranger District five year strategy for vegetation management/fuels reduction.
7. The cumulative impacts are not significant, as documented in the EA. Although there will be individual short-term disturbance to some species, the proposed action will not contribute to a

downward trend in populations (EA Environmental Consequences – Wildlife/Sensitive Plants (pgs. 3-13 to 3-14)). There will be a long-term benefit to the watersheds and forest health from reduction of tree densities and fuels (EA Environmental Consequences – Vegetation (pgs. 3-9 to 3-11) and Water/Soils (pgs. 3-16 to 3-19)).

8. The action will have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. A heritage resource field survey was completed with a determination of “no effect” to historic properties and submitted to the California State Historic Preservation Office (SHPO). The implementation activities will be designed to avoid impacting the historic archaeological resources identified in the project areas. Over the long term, the project will protect some of these resources by reducing the threat of a severe wildland fire (EA Environmental Consequences – Heritage Resources (pg. 3-12)).

9. The action will not adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, because there are none known to exist within the analysis area (EA Environmental Consequences - Wildlife/Sensitive Plants (pgs. 3-13 to 3-14)).

10. The action will not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA. This decision will not adversely affect consumers, civil rights, minority groups, or woman. Applicable laws and regulations were considered in the EA (refer to findings below in Findings Required by Other Laws and Regulations).

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

Consultation with the U.S. Fish and Wildlife Service, The California State Historic Preservation Office, and the local tribes was completed. The project was designed in conformance with land and resource management plan standards and guidelines. My decision is consistent with all applicable laws, Executive orders, regulations and policies as summarized below:

National Forest Management Act (NFMA). This action is consistent with the Toiyabe Land and Resource Management Plan (1986) as amended by the Sierra Nevada Forest Plan Amendment of 2004.

Healthy Forest Restoration Act (HFRA) of 2003. This project was analyzed and is an authorized hazardous fuels reduction project in accordance with the HFRA because 100 percent of this project is located on Federal lands within the wildland urban interface.

Migratory Bird Treaty Act (MBTA). The EA considered impacts to migratory birds. A limited operating period (LOP) within mastication areas will occur April 1st to July 15th during migratory bird breeding season. Short-term impacts are expected to migratory birds; however, long term habitat conditions will be improved. This decision is in compliance with the MBTA requirements and executive order 13186.

Endangered Species Act of 1973. There are no federally listed threatened, endangered, or proposed species with the project area, as documented by the U.S. Fish and Wildlife Service in a letter dated August 12, 2010 (Ref. No 2010-SL-0388).

National Historic Preservation Act of 1966. The Forest Service conducted an intensive cultural site survey of the project area. Results of the survey were documented in a Cultural Resource Report, which made of determination the project will have no effect on any known cultural resources eligible for the National Register of Historic Places. On August 31, 2010, heritage report R2010041702031 was submitted to California SHPO for concurrence.

Clean Air Act of 1970, as amended. The Great Basin Air Quality management District (GBAQMD) enforces compliance with the Clean Air Act. Burning permits are issued and administered by the GBAQMD. Smoke production and management, as analyzed in the EA, is consistent with the GBAQMD.

Clean Water Act of 1977, as amended. The EA analysis determined there will be no adverse impacts to water quality.

Floodplain Management and Protection of Wetlands. This decision is in compliance with Executive Order 11988 and 11990 because it will have no impact on floodplains or wetlands.

Environmental Justice. This decision is in compliance with Executive Order 12989 because there will be no disproportionately high adverse human health or environmental effect on minority or low-income populations.

IMPLEMENTATION DATE

The project may be implemented immediately following this decision. Implementation will most likely begin in the October of 2010.

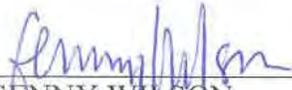
ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES

This proposed project is subject to the objection process pursuant to 36 CFR Part 218 Subpart A and is not subject to the notice, comment, and appeal procedures found in 36 CFR Part 215. Objections opportunities were provided from August 18 to September 16, 2010. No objections were filed during this period. Pursuant to 36 CFR, Part 218, no appeals are provided.

CONTACT INFORMATION

For copies of the Markleevillage Fuels Reduction Project Environmental Assessment, please visit the Humboldt-Toiyabe National Forest web site at: www.fs.fed.us/htnf. You may also contact the Project Manager, Amanda Brinnand, Carson Ranger District, 1536 So. Carson Street, Carson City, NV 89701, 775-882-2766.

SIGNATURE PAGE



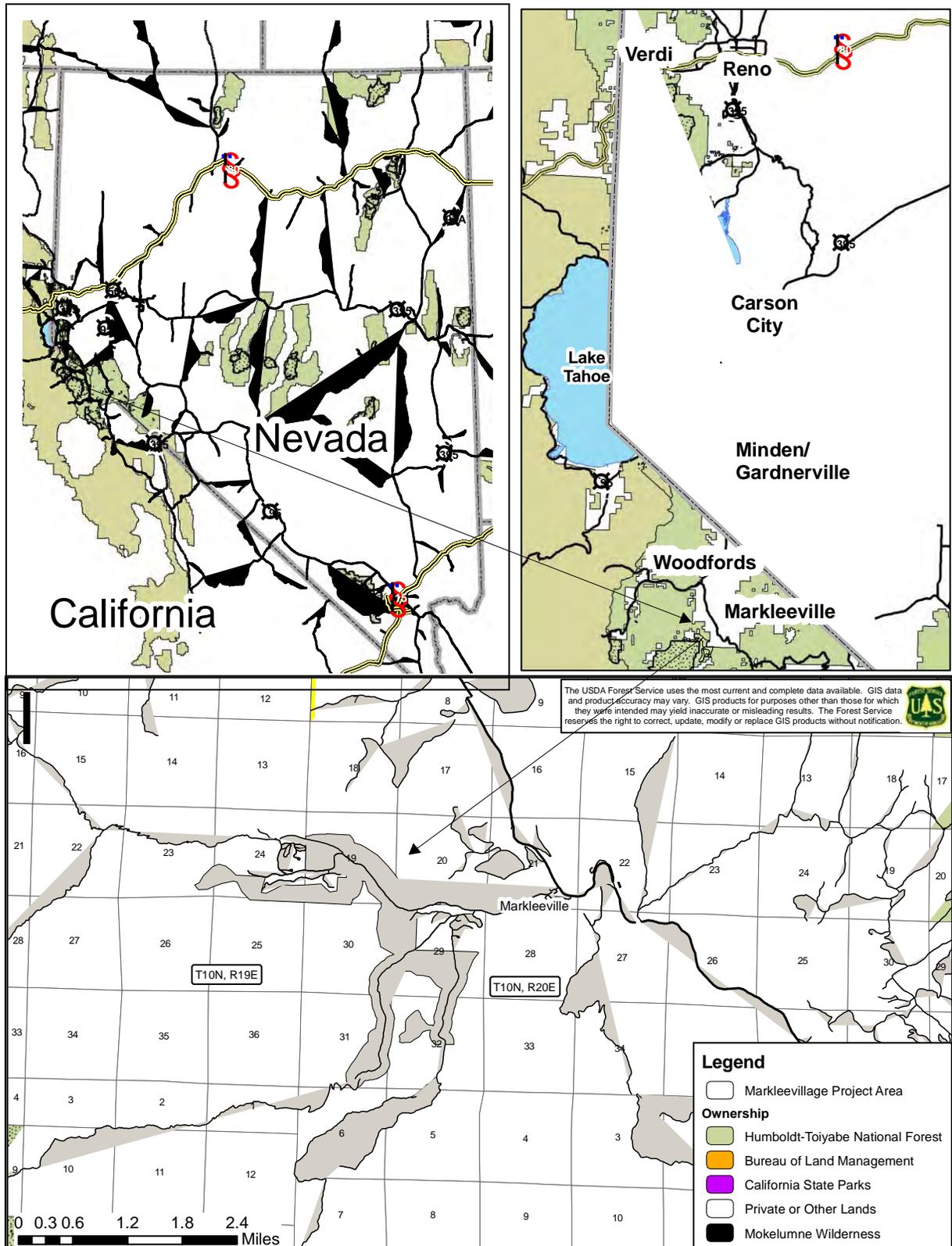
GENNY WILSON
District Ranger

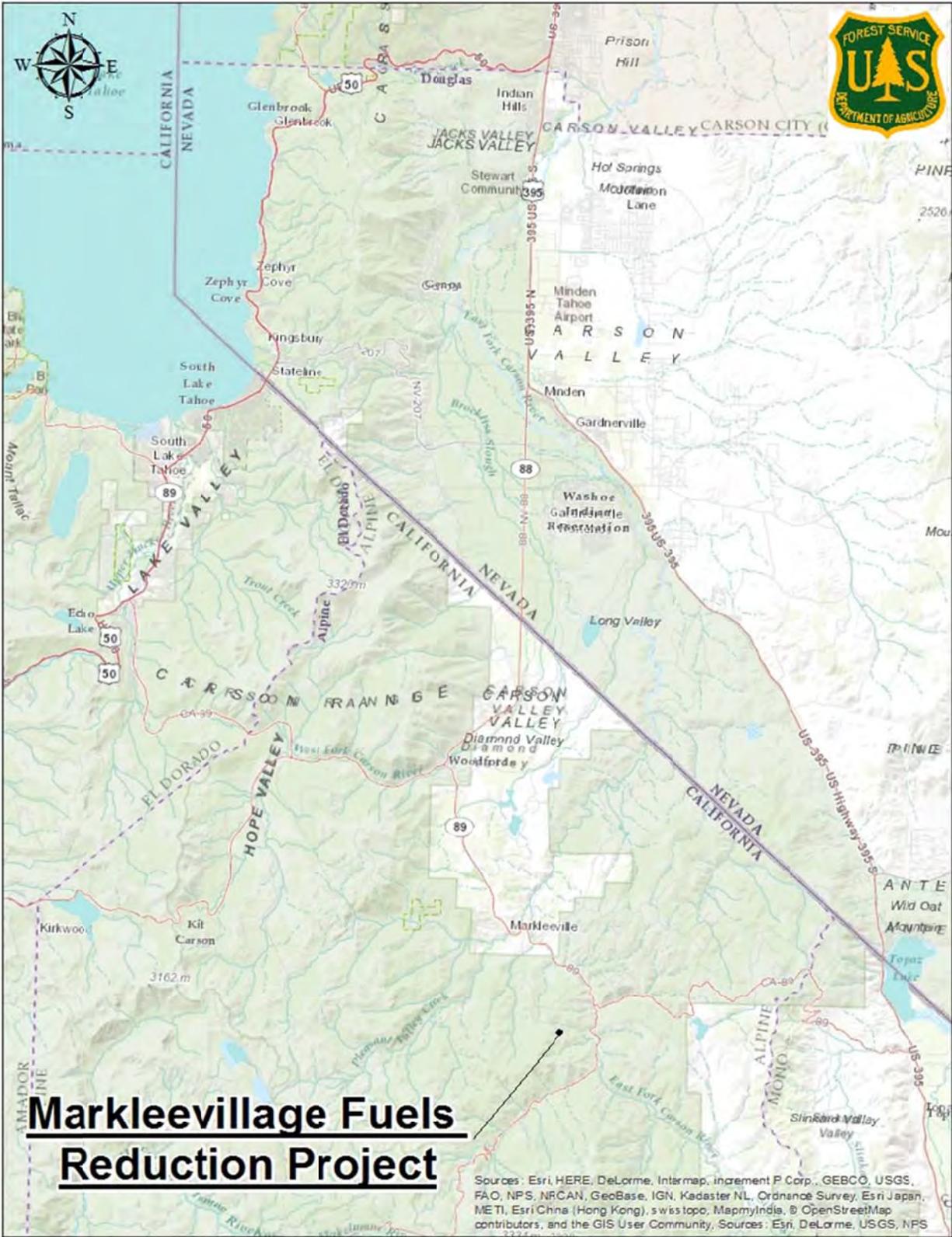
September 30, 2010

Date Signed

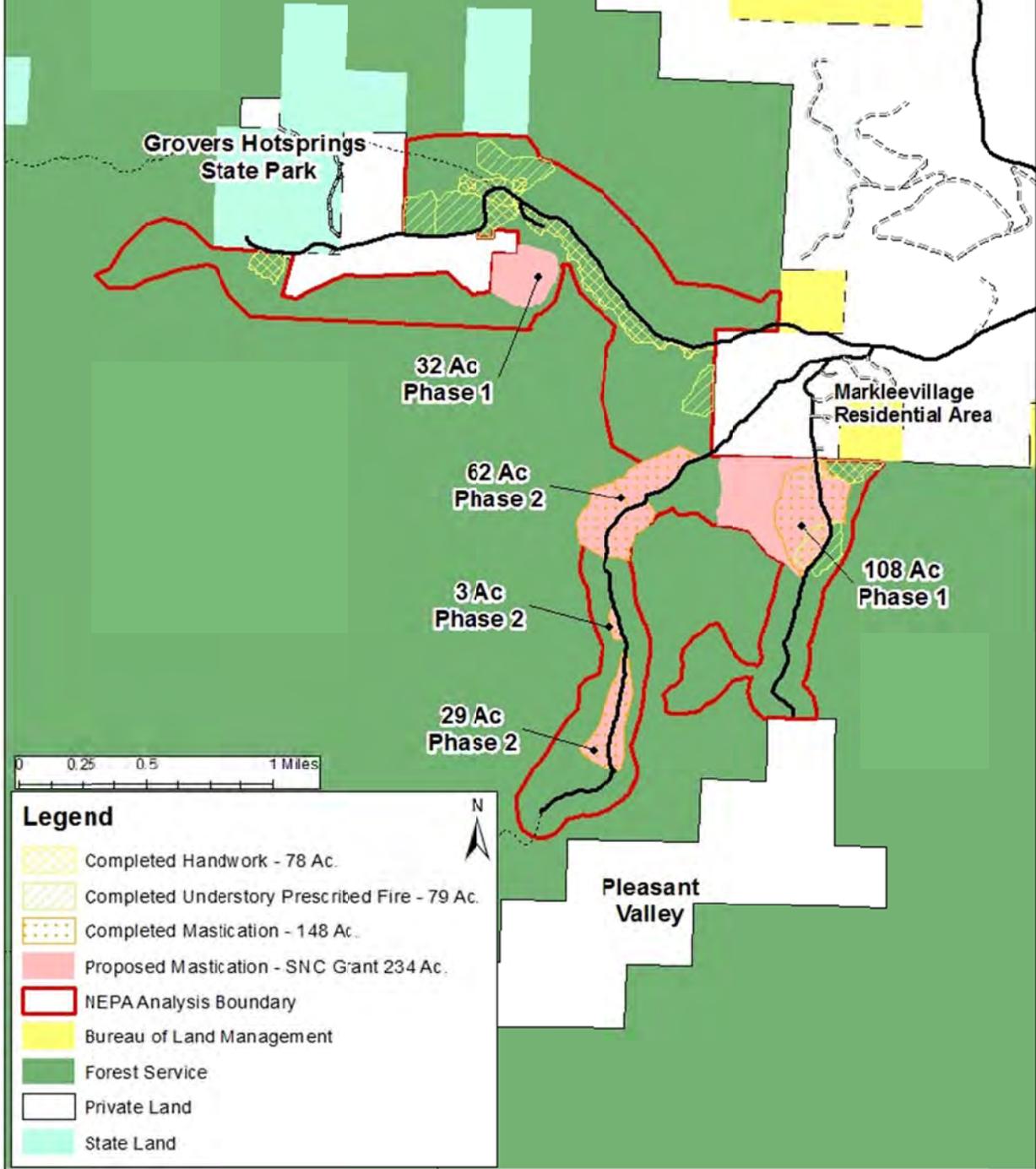
**APPENDIX A
MAPS**

Figure 1 – Vicinity map

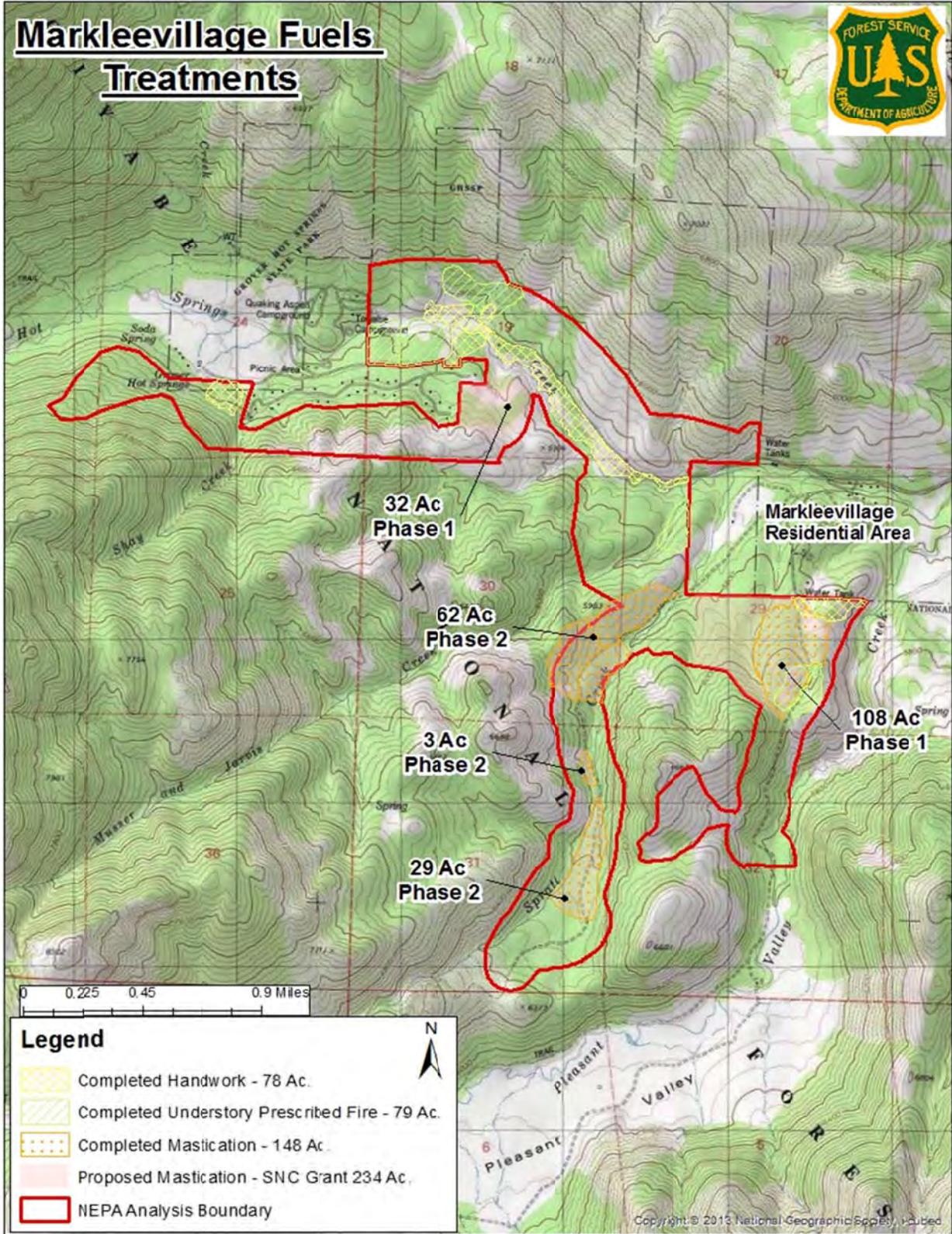




Markleevillage Fuels Treatments



Markleevillage Fuels Treatments



Markleevillage Fuels Reduction Project – Alpine County
Project Photos



Figure 1. Treatment Area 1 - Pleasant Valley, dense hillside vegetation



Figure 2. Treatment Area 1 - Pleasant Valley, brush and ladder fuels



Figure 3. Treatment Area 1 - Pleasant Valley, thick understory brush



Figure 4. Treatment Area 2 - Thornburg Canyon, dense pine regeneration.



Figure 5. Treatment Area 2 - Thornburg Canyon, thick & flashy understory fuels



Figure 6. Treatment Area 2 - Thornburg Canyon, dense pine and ladder fuels

Markleevillage Fuels Reduction Project – Alpine County

SNC Proposition 1 Grant Application – Land Tenure

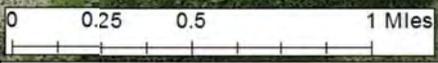
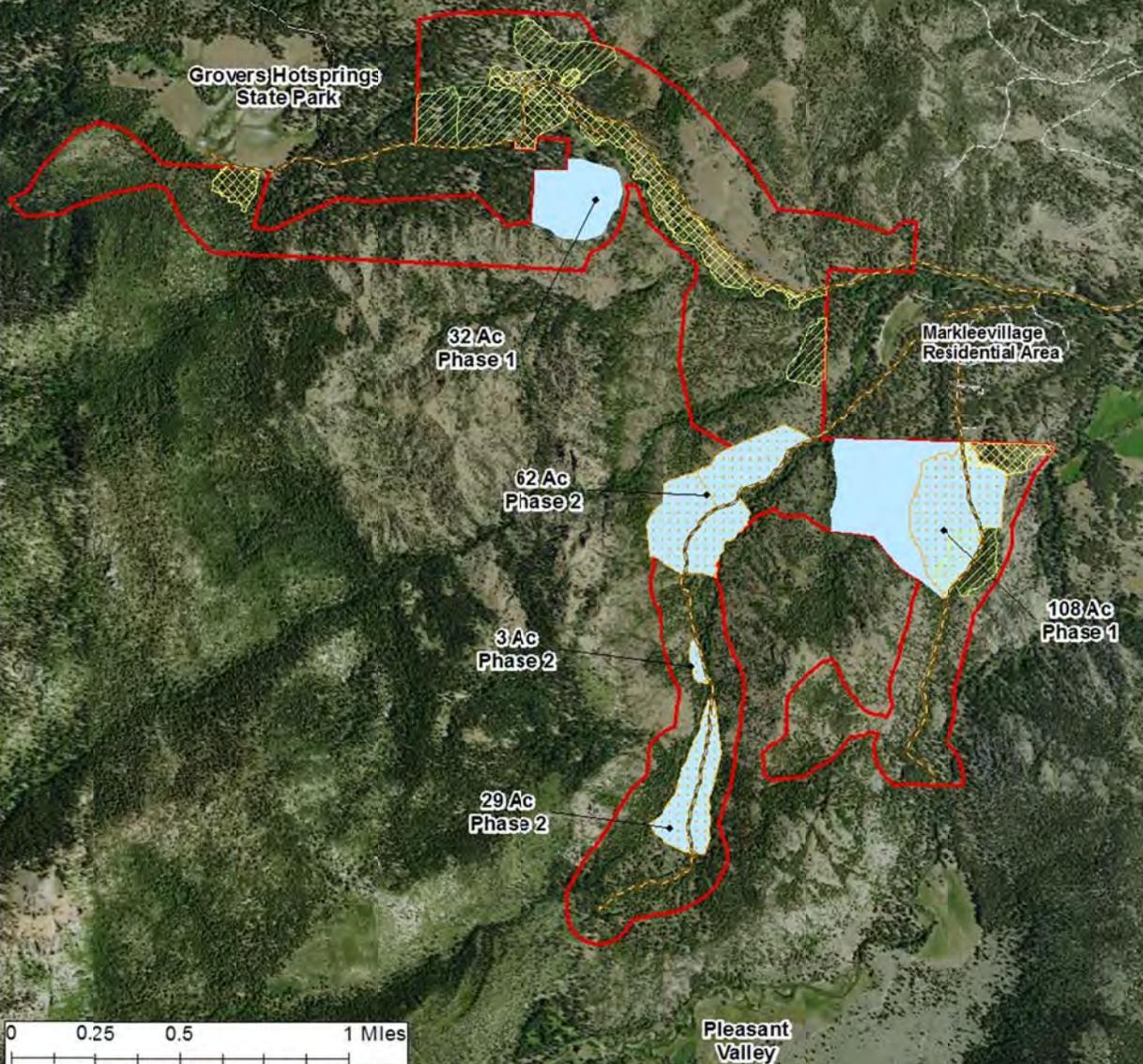
Land Tenure

The project is located on the Carson Ranger District of the Humboldt-Toiyabe National Forest, approximately 1.5 mile outside the town of Markleeville, California. All land within the project area is management by USFS.

Although Alpine County is the lead agency on the grant, USFS will directly manage contractor and all fuels work conducted. The County will assist with project management.

As indicated in their letter of support, USFS has given their support of the County's grant application for the needed implementation of the Markleevillage Fuels Reduction Project.

Markleevillage Fuels Treatments



Legend

- Completed Handwork - 73 Ac.
- Completed Understory Prescribed Fire - 79 Ac.
- Completed Mastication - 148 Ac.
- Proposed Mastication - SNC Grant 234 Ac.
- NEPA Analysis Boundary

Map data by Esri, DeLorme, GeoEye, Earthstar, United States, USGS, AeroGRID, IGN, SRTM, and the USGS National Map Accuracy Act of 1992.