BUREAU OF RECLAMATION
NEW MELONES PROJECT AREA

FIRE MANAGEMENT PLAN
2007

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ACRONYMS

AMR	Appropriate Management Response
AOP	Annual Operating Plan
BA	Biological Assessment
BI	Burning Index
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BO	Biological Opinion
Reclamation	Bureau of Reclamation
CAR	Communities at Risk, At-risk Communities, Communities of Interest
CC	Condition Class
CDFG	California Department of Fish and Game
CDF	California Department of Forestry and Fire Protection
CWPP	Community Wildfire Protection Plan
CX	Categorical Exclusion
DNA	Determination of NEPA Adequacy
EA	Environmental Analysis
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESR	Emergency Stabilization and Rehabilitation
FIL	Fire Intensity Level
FMAP	Fire Management Activity Plan
FMO	Fire Management Officer
FMP	Fire Management Plan
FMU	Fire Management Unit
FPA	Fire Program Analysis
FPA -PM	Fire Program Analysis – Preparedness Module
FPD	Fire Protection District
FPU	Fire Planning Unit
FR	Fire Regime
FCC	Fire Condition Class
FUELSPRO	Fuels Project Program of Work

FWFMP	Federal Wildland Fire Management Policy
FWS	U.S. Fish and Wildlife Service
GACC	Geographic Area Coordination Center
HCP	Habitat Conservation Plan
HFI	Healthy Forest Initiative
HFR	Historic Fire Regime
HFRA	Healthy Forest Restoration Act
ICS	Incident Command System
IIAA	Interagency Initial Attack Assessment
IM	Internal Memorandum
LUP	Land Use Plan
MIST	Minimum Impact Suppression Tactics
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFDRS	National Fire Danger Rating System
NFMAS	National Fire Mgmt Analysis System
NFP	National Fire Plan
NFRP	Normal Year Fire Rehabilitation Plan
NHPA	National Historical Preservation Act
NIFC	National Interagency Fire Center
NOAA	National Oceanic Atmospheric Administration
NPS	National Park Service
NWCG	National Wildfire Coordination Group
PCHA	Personal Computer Historical Analysis
RAMS	Risk Assessment and Mitigation Strategies Planning Process
RAWS	Remote Automated Weather Stations
RFA	Rural Fire Assistance
RFD	Rural Fire Department
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision

SHPO	State Historic Preservation Office
SSS	Special Status Species
TCU	Tuolumne Calaveras Ranger Unit
TE&S	Threatened, Endangered, and Sensitive Species
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
W&S	Wild and Scenic River
WFSA	Wildland Fire Situation Analysis
WFU	Wildland Fire Use
WHMA	Wildlife Habitat Management Areas
WIMS	Weather Information Mgmt System
WSA	Wilderness Study Area
WUI	Wildland-Urban Interface

I. INTRODUCTION

The U.S. Bureau of Reclamation (Reclamation) manages the lands and reservoir known as the New Melones Project Area, northeast of Modesto, California. Bureau of Reclamation Instructions Series 210, Land, and Part 215, Resources Management, require Reclamation to prepare a resource management plan for all lands for which it has jurisdiction. In compliance with this guidance, Reclamation developed a New Melones Lake Draft Resource Management Plan (RMP) in 1995 and the New Melones Lake RMP update scheduled for 2007. The RMP provides background information and planning guidance to manage all resources at New Melones Lake. The Fire Management Plan (FMP) for New Melones Project Area is the next step in the resource planning process and expands on the *Fire Management Element* of the 1995 New Melones Lake Draft RMP and the 2007 RMP update.

New Melones Lake is situated approximately 60 miles northeast of Modesto and approximately 10 miles west of Sonora, on the Stanislaus River in the Sierra Nevada foothills. The reservoir is bisected by the Tuolomne/Calaveras County Line

Fire is an integral part of California's Sierra foothill landscape. Outbreaks of wildfire occur routinely in the dry season and threaten life and property. However, fire through the means of prescribed burning, combined with the use of non-fire fuel treatments, can be used to restore and maintain natural ecosystems, influence natural succession patterns, restore or maintain vistas, reduce fuels that contribute to wildfire hazard, enhance the habitat of sensitive species, control exotic species, and create fuelbreaks near development or project area boundaries. The policies and management actions below specify an approach to fire and fuels management that focuses on mitigating fire hazard near infrastructure and residences by reducing the probability of ignition from human sources as well as by reducing hazardous fuel loading through a variety of fire and non-fire vegetation treatment strategies.

A. Purpose

The purpose of the FMP is to identify and integrate all wildland fire management guidance, direction, and activities required to implement national fire policy and the National Fire Plan (NFP). The FMP will also reflect and integrate fire management direction from the 1995 New Melones Lake Draft Resource Management Plan, subsequent amendments to this RMP, and other applicable New Melones Lake special management and/or activity plans. The existing RMP contains specific fire related planning decisions and guidance and is included within this FMP. The FMP is prepared using existing knowledge and professional judgment and will be amended when the RMP is amended to provide additional specific land use planning decisions and guidance for fire management decisions.

Existing management direction, which includes the RMP and various implementation plans, allows for fire and non-fire treatments to be used to restore landscape ecosystems, to meet resource management objectives, and improve protection of human life and property through the reduction of hazardous fuels. The New Melones Project Area FMP will provide clear fire management direction for Reclamation New Melones resource personnel and operations. After

the RMP is updated in 2007, this FMP will be modified to reflect those changes, if necessary. In the meantime, there is adequate information and direction to develop the following fire management strategies:

- Wildfire Suppression
- Prescribed Fire
- Non-Fire Fuels Treatment
- Emergency Stabilization and Rehabilitation (ESR)
- Community Protection/Assistance, Prevention and Education

Site-specific projects will be derived from these strategies and the accompanying proposed actions, alternatives, and environmental analyses, in compliance with the National Environmental Policy Act (NEPA), will be addressed at that time. The information in this plan may strengthen cumulative effects analysis when planning and analyzing site-specific projects. In addition, this FMP lays the foundation for future collaborative efforts involving interagency partners and cooperators.

This FMP may also provide quantified information for the Fire Program Analysis (FPA) planning process. FPA is the interagency fire planning model that will be used to project the budget and personnel needs for fire management organizations administered by the U.S. Departments of the Interior (USDI) and Agriculture (USDA). The agencies include the Forest Service (USFS), the Bureau of Land Management (BLM), the National Park Service (NPS), the Bureau of Indian Affairs (BIA), and the Fish and Wildlife Service (USFWS). The FPA process is being implemented in two phases. The first phase covers initial attack and wildland fire use on agency protected lands. The second phase includes fuels management, community education/ assistance, hazard mitigation, and fire prevention activities. Since CDF provides fire protection for Reclamation lands in this area, this FMP will provide information primarily for Phase II of FPA.

The fire management strategies and priorities recommended in this FMP will be updated as appropriate to reflect current issues and conditions.

National Direction for Fire Management Planning

The purpose of this FMP is to incorporate newly developed fire and fuels management strategies and tactics into a document which supports the land and resource management goals and objectives of the New Melones Lake Draft RMP. In addition, to comply with the Federal Wildland Fire Management Plan Policy and Program Review (1995 and 2001) and the National Fire Plan's A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy and Implementation Plan (2002), all federal lands with burnable vegetation must be covered under an approved FMP.

Federal policy requires that a FMP be developed for all acres of burnable vegetation on Federal land, and that they be linked closely with an approved RMP. This FMP was developed in

compliance with the Interagency Fire Management Plan Template, to ensure that all FMPs prepared by USDI agencies have consistent content and format.

B. Scope

The 1995 New Melones Lake Draft RMP provides extensive background information and comprehensive planning guidance to manage all resources in the New Melones Project Area. This FMP is a companion document to the 1995 New Melones Lake Draft RMP and subsequently to the New Melones Lake RMP 2007 update, and serves to elaborate on the fire management issues.

In the 1995 RMP there were 18 resource management elements. One of the 18 elements addressed is the Fire Management Element. For each element, the RMP provides an approach or goal, as well as policies and management actions. Among the specific recommended actions in the RMP is the development of a fire management plan, a grazing management plan, and a vegetation management plan. The Vegetation Management Plan (VMP) was the first of the three plans completed. The VMP was developed in 1997. The VMP presents current grazing and fire management practices recommended by the University of California's (UC) Cooperative Extension and Integrated Hardwood Range Management Program, and the California Native Plant Society (CNPS). It provides recommendations for grazing and fire management practices as they apply to vegetation management. These recommendations have been reviewed and incorporated into this fire management plan, where appropriate.

The FMP is the second of the three plans. This plan will incorporate recommendations from the VMP, where feasible and appropriate. The recommendations of the VMP and FMP may not be fully implementable until a revised set of goals and objectives specific to grazing is developed in the 2007 RMP update.

The FMP also functions as a working reference to provide continuity of operations for wildland fire management, hazardous fuel reduction treatments, fire prevention and education, and burned area rehabilitation activities that occur within the New Melones Project Area. The FMP can also provide the necessary baseline information to generate out-year budget and planning elements for fuels management planning requirements in RAMS, FuelsPro and Fire Program Analysis Phase II.

The New Melones FMP will be reviewed annually and updated as necessary. This FMP will also provide information and direction for the development of subsequent, future fire management-related planning documents, risk assessments and operational procedures.

Examples of future planning requirements and development of operational procedures are as follows:

- Development and further refinement of landscape and site-specific fire management and fuel management objectives, such as reducing fuel loads in high fire hazard areas, consistent with the New Melones Lake *Vegetation Management Plan*.

- Further development of site-specific vegetation management objectives for desired plant communities to describe the appropriate treatment for achieving the target composition including mechanical, hand, and prescribed burn approaches.
- Further development of landscape and site-specific fuel management objectives and activities that will reduce wildfire frequency and intensity by reducing fuel loading; enhance wildlife habitat by increasing access, promote growth of herbaceous forage, and rejuvenate shrub forage; increase water yields by reducing transpirational losses produced by large volumes of decadent shrub species; and, maintain diverse, open shrublands for recreational activities.
- Create a detailed fuels survey map, slope/aspect map, risk assessment map, and a compilation of the 90% weather conditions for Tuolumne and Calaveras Counties to assist in predicting fire behavior;
- An evaluation and mapping of site-specific fire hazards throughout Reclamation lands with a focus on current and proposed recreational facilities and adjacent residences and structures. Further risk and hazard analysis should be implemented through the RAMS analysis process, a USDI hazard evaluation program which is based on fire behavior, fuel load, slope, probable location and rate of ignition, potential loss of life, potential loss of valuable property, and access restrictions.
- Development of a New Melones Project Area pre-suppression (ie; pre-attack) plan that specifies development and maintenance of fire defense components such as firebreaks, fuelbreaks, roads, water sources, helispots, and mobilization points.
- Development of specific procedures for coordinating with cooperating agencies and land owners regarding vegetation clearance requirements.
- Development of a day-to-day operations plan that includes: criteria to initiate special precautions; actions to take under high fire danger; agreements to be made with local fire departments and agencies; and a pre-attack plan developed in conjunction with the California Department of Forestry and Fire Protection (CDF).
- Development of specific procedures for site closures during periods of extreme fire danger, in coordination with adjacent federal and state agencies. These procedures would include the posting of the main entry points to Reclamation lands. Signs will give the current fire hazard warning status and/or the reason for site closure if necessary under extreme fire hazard conditions.

C. Relationship to Environmental Compliance

This FMP has been prepared to assist in the identification and implementation of decisions made within the 1995 RMP and 2007 New Melones RMP update, inclusive of subsequent plan amendments and implementation-level activity plans. Impacts of fire suppression, hazardous fuels reduction and burned area rehabilitation activities on lands administered by Reclamation will be analyzed through the NEPA process that will accompany the 2007 New Melones Lake RMP update.

As an interim strategic document, the FMP can be categorically excluded from further NEPA analysis under DOI 516 DM 2, Appendix 1, Chapter 2, 1.10: "Policies directives, regulations and guidelines of an administrative, financial, legal, technical or procedural nature; or the environmental effects of which are too broad, speculative or conjectural to lend themselves to meaningful analysis and will be subject later to the NEPA process, either collectively or case-by-case".

Land Use Plan Conformance

General fire and resource management objectives and strategies outlined in the FMP are in conformance with the goals, objectives, management actions, and terms and conditions of the supporting 1995 New Melones Lake Draft RMP and the 2007 New Melones Lake RMP update. Revisions, additions, and adjustments to the FMP that are in conformance with the land use plan may be made at any time as a result of annual review of the FMP.

FMP Implementation

Prior to implementing fire management projects on-the-ground, including projects that may be planned in cooperation with other agencies, additional environmental analysis for compliance with NEPA, ESA and other federal and state laws and regulatory requirements, such as the National Historic Preservation Act, the Clean Water Act and the Clean Air Act may be required.

D. Collaboration

Reclamation's New Melones Project Area FMP was developed with review and consultation by representatives from the CDF Tuolumne-Calaveras Ranger Unit (TCU), the Bureau of Land Management Folsom Field Office, the U.S. Forest Service Stanislaus National Forest, the Highway 108 Fire Planning Group, and the Altaville-Melones Fire District. The extensive use of cooperative interagency fire resources is recognized as key components in meeting fire management objectives on Reclamation lands within the New Melones Project Area.

E. Authorities

The Reclamation Act of 1902 establishes the primary authority and provides guidance for how public lands are to be managed by Reclamation.

Authority is delegated from the Secretary of the Interior to the Director of the Bureau of Reclamation for the operation of a resource protection program on lands under the jurisdiction of Reclamation. DOI 255 DM 1 and Reclamation RM ACM 01-01 document this delegation of authority.

Additionally, this FMP has been developed to fully comply with the following legislative efforts:

- Reclamation Act of 1902

- American Antiquities Act (1906)
- Protection Act of September 20, 1922 (42 Stat. 857; 16 U.S.C. 594)
- Reclamation Project Act of 1939
- Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66; 42 U.S.C. 1856a)
- Federal Water Project Recreation Act of 1965 (as amended through PL 106-580, Dec. 29, 2000)
- National Historic Preservation Act (NHPA; 1966)
- National Environmental Policy Act (NEPA; 1969)
- Endangered Species Act (ESA; 1973)
- Federal Fire Prevention and Control Act of October 29, 1974 (88 Stat. 1535; 15 U.S.C. 2201)
- Archaeological Resources Protection Act (ARPA; 1979)
- Wildfire Suppression Assistance Act of 1989 (P.L. 100-428, as amended by P.L. 101-11, April
- 1995 Federal Wildland Fire Management Policy
- United States Department of the Interior Manual (910 DM 1.3) and the 1998 620 DM Chapter 1, Wildland Fire Management General Policy and Procedures
- National Fire Plan (USDA and USDI, 2000)
- Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy (USFS response to GAO report GAO/RCED-99-65 2000)
- 10 Year Comprehensive Strategy (USDA and USDI 2001)
- Review and Update of the 1995 Federal Wildland Fire Management Policy (USDA and USDI, 2001)
- 10 Year Comprehensive Strategy Implementation Plan (USDA and USDI 2002)
- Burn Area Emergency Stabilization and Rehabilitation Handbook (USDA and USDI 2002)
- Healthy Forests: An Initiative for Wildfire Prevention and Stronger Communities. (HFI 2002)
- Healthy Forest Restoration Act (HFRA 2003)
- Protecting People and Natural Resources: A Cohesive Fuels Treatment Strategy (USDA and USDI 2006)
- Appropriate Reclamation Manuals (RM)

II. RELATIONSHIP TO LAND MANAGEMENT PLANNING AND FIRE POLICY

This chapter outlines the national policy, regional guidance, Reclamation regional policy, and local land use planning guidance that provide direction for this FMP.

A. Relationship to Fire Policy

The Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy (FWFMP) was developed by the Secretaries of the USDI and USDA in 1995 to respond to dramatic increases in the frequency, size, and catastrophic nature of wildfires in the United States. This policy was reviewed and reaffirmed by the Secretaries in 2001. The FWFMP identified the need for a new approach to fire management on federal lands and led to the development of the National Fire Plan (NFP).

This FMP adheres to the following established fire policy:

- September 2000, "Managing the Impacts of Wildfires on Communities and the Environment."
- August 2001 and amended May 2002, Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy and May 2002, Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10 Year Comprehensive Strategy – Implementation Plan – provide a suite of core principles and four goals. The strategy provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation and commodity groups, and community-based restoration groups to reduce wildland fire risk to communities and the environment.
- August 2002, "Healthy Forests – An Initiative for Wildfire Prevention and Stronger Communities"- created a uniform categorical exclusion for certain fuels reduction projects, streamlined the NEPA process, and better coordinated ESA consultations.
- December 2003, "Healthy Forest Restoration Act" – provides improved statutory processes for hazardous fuel reduction projects and streamlined the EA process.
- Created January 2004 and amended annually, "Interagency Standards for Fire and Fire Aviation Operations" describes policy and operations for all fire related activities in the DOI and USDA.
- February 2006, Protecting People and Natural Resources: A Cohesive Fuels Treatment Strategy – goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and prioritize treatments to reduce the vegetation that supports fires.

Additionally, the 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy states:

1. **Safety** – Firefighter and Public Safety is the first priority. All Fire Management Plans and activities must reflect this commitment.
2. **Fire Management and Ecosystem Sustainability** – The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological and social components.
3. **Response to Wildland Fire** – Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the appropriate management response to the fire.
4. **Protection Priorities** – The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.
5. **Use of Wildland Fire** – Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.
6. **Rehabilitation and Restoration** – Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, safety, and to help communities protect infrastructure.
7. **Wildland Urban Interface** – The operational roles of federal agencies as partners in the Wildland Urban Interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify mutual responsibilities of the partners, including funding.
8. **Planning** – Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
9. **Science** – Fire Management Plans and programs will be based on a foundation of sound science. Research will support on-going efforts to increase scientific knowledge of biological, physical, and sociologic factors. Information needed to support fire management will be developed through an integrated interagency fire science program.

Scientific results must be made available to managers in a timely manner and must be used in the development of land management, fire management, and implementation plans.

10. **Preparedness** – Agencies will ensure their capabilities to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
11. **Suppression** – Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
12. **Prevention** – Agencies will work together with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
13. **Standardization** – Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values to be protected, methodologies, and public education programs for all fire management activities.
14. **Interagency Cooperation and Coordination** – Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.
15. **Communication and Education** – Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
16. **Agency Administrator and Employee Roles** – Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.
17. **Evaluation** – Agencies will adopt and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

The National Fire Plan

The Secretaries of USDI and USDA initiated the National Fire Plan (NFP) in 2000 to address the needs identified in the FWFMP. The NFP is not an actual document, but a nationally coordinated effort to protect communities and natural resources from the harmful effects of increasing wildfire occurrence and severity in the United States. The NFP establishes the overarching purpose and goals, which are articulated and carried forward through the 10-Year Comprehensive Strategy (USDI, USDA 2001), the Cohesive Fuels Treatment Strategy for

Protecting People and Natural Resources (USDA and USDI 2006), and other supporting documents.

The five primary goals of the NFP

1. Assure that necessary firefighting resources and personnel are available to respond to wildfires that threaten lives and property.
2. Conduct emergency stabilization and rehabilitation activities on landscapes and communities affected by wildfire.
3. Reduce hazardous fuels (dry brush and trees that have accumulated and increase the likelihood of unusually large fires) in the country's forests and rangelands.
4. Provide assistance to communities that have been or may be threatened by wildfire.
5. Commit to the Wildland Fire Leadership Council, an interagency team created to set and maintain high standards for wildland fire management on public lands.

To implement these goals one must have an understanding of ecological processes that define a landscape in fire terms. The NFP and supporting documentation provide a baseline for quantifying landscapes in order to prioritize treatments. The following are tools used to define the landscape for fire return intervals and departure from this standard.

Fire Regime

A generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, predictability, seasonality, intensity, duration, scale (patch size), as well as regularity or variability. There are five combinations of fire frequency, expressed as fire return interval in fire severity.

Fire Regime Descriptions	
I	0-35 year frequency and low severity (most commonly associated with surface fires) to mixed severity (in which less than 75 percent of the dominant over story vegetation is replaced
II	0-35 year frequency and high severity (stand replacement: greater than 75 percent of the dominant over story vegetation is replaced)
III	35-200+ year frequency and mixed severity
IV	35-200+ year frequency and high severity
V	200+ year frequency and high severity

Condition Class

Fire condition classes measure the degree of departure from reference conditions, possibly resulting in changes to key ecosystem components, such as vegetation characteristics (species composition, structural stage, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances, such as insect and disease mortality, grazing, and drought. Possible causes of this departure include (but are not limited to)

fire suppression, timber harvesting, livestock grazing, introduction and establishment of exotic plant species, and introduced insects and disease.

Fire Conditions Descriptions		
Condition Class 1	Low	For the most part, fire regimes in this Fire Condition Class are within historical ranges. Vegetation composition and structure are intact. Thus, the risk of losing key ecosystem components from the occurrence of fire remains relatively low.
Condition Class 2	Moderate	Fire regimes on these lands have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified on these lands.
Condition Class 3	High	Fire regimes on these lands have been significantly altered from their historical return interval. The risk of losing key ecosystem components from fire is high. Fire frequencies have departed from historical ranges by multiple return intervals. Vegetation composition, structure and diversity have been significantly altered. Consequently, these lands verge on the greatest risk of ecological collapse.

NFP states that fuels projects need to treat vegetation types within Fire Regime Groups I, II, and III, and by doing so move them to a better Condition Class.

The 10-Year Comprehensive Strategy

The 10-Year Comprehensive Strategy was prepared in 2001 by the USDI, USDA, and the Western Governor's Association to provide a more detailed framework for accomplishing the goals of the NFP. This strategy emphasizes a collaborative, community-based approach to address wildland fire issues and identifies guiding principles and management actions for agencies to follow in implementing the NFP. The guiding principles of the Comprehensive Strategy include both goals and guiding principles.

The four goals of the 10-Year Comprehensive Strategy

1. Improve Fire Prevention and Suppression: Public and firefighter safety is the first priority in all fire management.
2. Reduce Hazardous Fuels: Prioritize hazardous fuels reduction where the negative impacts of wildfire are greatest.
3. Restore Fire-Adapted Ecosystems:
   - Prevent invasive species and restore watershed function and biological communities through short-term rehabilitation.
   - Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fires on a priority watershed basis through long-term restoration.

4. Promote Community Assistance: Promote better fire prevention planning and actions in local communities through technical assistance and cost-sharing incentives.

The three guiding principles of the 10-Year Comprehensive Strategy

1. Priority setting that emphasizes the protection of communities and other high-priority watersheds at-risk.
2. Collaboration among governments and broadly representative stakeholders
3. Accountability through performance measures and monitoring for results.

The Cohesive Strategy for Protecting People and Sustaining Natural Resources

The Cohesive Strategy for Protecting People and Sustaining Natural Resources was prepared in 2000 by the USDA. It projected the quantity and rate of fuels reduction treatments required on a landscape scale to restore fire-adapted ecosystems and protect communities from increasing wildfire. It was written by the USFS in response to the Government Accounting Office after the devastating 2000 fire season. It was never signed by the USDI agencies. Because of this it has since been updated and is only mentioned here to segue into the following publication.

Protecting People and Natural Resources: A Cohesive Fuels Treatment Strategy

This strategy was created in 2006 to focus on goals two, three, and four of the 10-year Comprehensive Strategy. The mission of the strategy is to lessen risks from catastrophic wildfires by reducing fuels build-up in forests and woodlands and by reducing threats from flammable invasive species on rangelands in the most efficient and cost effective manner possible. The strategy will result in fewer large, catastrophic fires and less damage from those that do occur than would otherwise be the case, vegetative conditions in which some fires will be used to fulfill appropriate ecological functions, and the establishment of viable infrastructure capable of improving and maintaining desired land conditions over the long term. The strategy efficiently and effectively focuses Federal land management efforts in collaboration with those of State, Tribal, and local governments to reduce risks that uncharacteristically severe wildfire pose to people, communities, and natural resources. Four principles guide the strategy: Prioritization, Coordination, Collaboration, and Accountability

B. California Fire Plan

The lands within Reclamation's New Melones Project Area are protected from fire by CDF. This is covered under an agreement that states that these lands will be provided fire protection and fall under State Responsibility Area (SRA). The State Board of Forestry and the California Department of Forestry and Fire Protection (CDF) have drafted a comprehensive update of the fire plan for wildfire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildfire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis.

The overall goal is to reduce total costs and losses from wildfire in California by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success.

The five strategic objectives of the California Fire Plan

1. To create wildfire protection zones that reduce the risks to citizens and firefighters.
2. To assess all wildlands, not just the state responsibility areas.
3. To identify and analyze key policy issues and develop recommendations for changes in public policy.
4. To have a strong fiscal policy focus and monitor the wildfire protection system in fiscal terms.
5. To translate the analyses into public policies.

The California Department of Forestry - Tuolumne-Calaveras Unit Fire Plan

The fire plan concept identified in the CDF Tuolumne-Calaveras Unit (TCU) Pre-Fire Management Plan involves a strategic and holistic approach to fire safe planning and project development. Under the "Alliance for a Fire Safe California," the TCU will work with other governmental agencies, public and private groups, and stakeholders to develop a comprehensive Fire Plan to address the fire problem within the Ranger Unit.

The TCU Pre-Fire Management Plan has been modified to conform to the components required in a Community Wildfire Protection Plan (CWPP) and it will serve as the CWPP for all communities in Calaveras County. CWPP development must include the following components:

1. **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
2. **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
3. **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Tuolumne County has already adopted a more detailed CWPP for their county. The 2005 TCU Pre-Fire Management Plan will include the Battalion analysis and projects from the County plan. TCU staff will ascertain if Tuolumne County would like to incorporate their CWPP into the TCU Unit Plan in 2006.

It is important to note that the fire safe councils in Tuolumne and Calaveras County play key roles in preparation and implementation of the plans. They act as the primary outreach mechanism for soliciting comments, needs and desires from the public, as well as disseminating

fire safe information to the communities they serve. Over the last several years, the councils have been planning and implementing their own projects and also assisting with agency projects.

CDF TCU staff work cooperatively with entities that provide fire and natural resource protection on Local Responsibility Areas (LRA) and Federal lands, to develop a comprehensive fire plan. CDF, local government (city and county), the United States Forest Service (USFS), the USDI Bureau of Land Management (BLM) and the USDI Bureau of Reclamation have worked cooperatively on pre-fire projects in TCU.

As stated in the Plan, existing CDF programs and treatment methods will be used to implement the projects that are developed through the TCU pre-fire management planning process. One of the most commonly used programs will be CDF's Vegetation Management Program (VMP). The VMP Program allows CDF to enter into agreements with landowners (private, federal, state, or local government) to assist them in performing fuel modification projects such as prescribed burns, manual or mechanical brush clearing, biomass reduction, and fuel break construction.

CDF TCU will use defensible space inspections to ensure that property owners have adequate clearance of flammable vegetation around their structures. This program will help reduce the structure ignitability of homes and businesses in the area. Timber harvesting of over-dense forest stands will be encouraged to reduce the fuel build-up, which leads to large, catastrophic wildfires. Demonstrations of these projects will be used to educate the public on the importance of creating a fire safe environment in and around their communities and homes.

C. Land Use Plan Guidance

The FMP derives overall program guidance from the following local New Melones plans:

- 1995 Bureau of Reclamation New Melones Lake Draft Resource Management Plan.
- 1997 Vegetation Management Plan for New Melones Lake
- 2006 Interim Peoria Wildlife Management Plan
- 2002 Central California Area Office Operations and Maintenance Plan: For the Protection of Endangered Species

Special Status Species Policy & Guidance

Endangered Species Act of 1973 (16U.S.C. 1531 et seq.), as amended.

Provisions of the ESA, as amended, apply to plants and animals that have been listed as endangered or threatened, those proposed for being listed, and designated and proposed critical habitat.

Sikes Act of 1974, Title II (16 U.S.C. 670g et seq.), as amended.

This Act directs the Secretaries of Interior and Agriculture to, in cooperation with the State agencies, develop plans to develop, maintain, and coordinate programs for the conservation and rehabilitation of wildlife, fish and game. Such conservation and rehabilitation programs shall include, but not limited to, specific habitat improvement projects, and related activities and adequate protection for species considered threatened or endangered.

Bureau of Reclamation Special Status Species Policy

It is Reclamation policy and practice to:

1. Conserve federally listed and proposed threatened or endangered species and the habitats on which they depend.
2. Ensure that actions requiring authorization or approval by Reclamation are consistent with the conservation needs of Special Status Species (SSS) and do not contribute to the need to list any SSS, either under provisions of the ESA or other provisions of this policy.

The terms conserve and conservation in this national policy and pursuant to the ESA are defined as *the use of all methods and procedures necessary to improve the status of federally listed species and their habitats to a point where the provisions of the ESA are no longer necessary.*

Fire management planning and activities on site-specific projects should consider the following where ESA species occur:

1. Recovery or conservation plans and activities that promote species recovery in the New Melones Project Area.
2. Terms and conditions of consultation with the USFWS, NOAA Fisheries, and CDFG to promote species recovery in the New Melones Project Area.
3. Where and how Reclamation fire management activities can conserve SSS, especially ESA listed proposed and candidate species.

Bureau of Reclamation Sensitive Species Policy

Reclamation's policy is to provide sensitive species with the same level of protection as is provided for candidate species, and to ensure that fire-related actions do not contribute to the need for the species to become listed. The Sensitive Species designation is normally used for species that occur on Bureau administered lands for which Reclamation has the capability to significantly affect the conservation status of the species through management.

Other Special Considerations Policy and Guidance

American Antiquities Act of 1906

This Act made it unlawful for any person to appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States.

Archaeological Resources Protection Act of 1979 (ARPA)

The Archaeological Resources Protection Act expands the protections provided by the Antiquities Act of 1906 in protecting archaeological resources and sites located on public and Indian lands. ARPA encompasses a great variety of objects, not just historic sites like the Antiquities Act.

Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)

This Act provided for the protection of Native American graves and artifacts.
National Historic Preservation Act of 1966
This Act established a program for the preservation of additional historic properties throughout the nation.

Bureau of Reclamation Cultural Resource Policy

Cultural resources are recognized as fragile, irreplaceable resources with potential public and scientific uses, and represent an important and integral part of our Nation's heritage.

It is Reclamation's practice to:

1. Manage cultural resources under Reclamation jurisdiction or control according to their relative importance, to protect against impairment, destruction, and inadvertent loss, and to encourage and accommodate the uses determined appropriate through planning and public participation.
2. Manage cultural resources under cultural resource statues and the planning and decision-making processes as are followed in managing other public land resources.
3. Ensure that tribal issues and concerns are given consideration during planning and decision-making, including fire management planning and decision-making for specific fire management projects.

This policy is not limited to Reclamation's activities that affect Federal lands. It is the responsibility of Reclamation to assure that its actions and authorizations are considered in terms of effects on cultural resources located on non-Federal lands. Fire management planning and activities on site-specific projects that involve non-Federal land shall consider this responsibility.

Goals, Standards, Objectives and/or Desired Future Condition – 1995 New Melones Draft Resource Management Plan

"*Achieve balanced stewardship of the natural, cultural, and recreational resources of the reservoir and the economic vitality of the surrounding communities."*

Wildland fire management activities within the New Melones Project Area will assist in meeting the resource management goals, standards, and guidelines from the plans listed above by incorporating the following management requirements into this plan:

Vegetation Element

- The following are objectives specific to major plant communities where vegetation management could occur within the New Melones Project Area:
  - Oak Woodlands
    - Manage oak woodlands for long-term viability or sustainability so oak stands replace themselves.
    - Rejuvenate oak woodlands affected by brush encroachment through the use of prescribed burns where possible.
  - Montane Woodlands
    - Increase biodiversity in montane woodland communities.
  - Annual Grassland
    - Prevent severe invasions of exotics (such as yellow starthistle). Invasive exotics should comprise less than 5 percent of the total plant cover.
    - Protect and promote native perennial grasslands.
    - Manage grasslands for sustainability
    - Minimize disturbance to grassland communities
  - Chamise Chaparral
    - Enhance the biodiversity, and a variable structure and age composition in chaparral communities
    - Prohibit clearing or conversion of chaparral to any other plant community; only type conversion by natural processes is recommended.
    - Rejuvenate brushlands through the use of prescribed burns where possible.
  - Valley and Foothill Riparian Woodland
    - Minimize the loss of valley and foothill riparian woodland communities.
    - Protect the riparian zone and riparian vegetation from degradation, including prevention of soil compaction, head-cutting, and undercutting.
    - Restore or enhance lost or degraded riparian communities where sustainable.
    - Promote streambank and reservoir shoreline stability to encourage establishment of riparian vegetation.
  - Wet Meadow
    - Protect any seep vegetation and wet meadow communities from loss or degradation.
  - Vernal Pools
    - Protect vernal pool communities from loss or degradation, including the invasion of exotic plants.

  - Serpentine-Based
    - Preserve vigorous serpentine-based communities.
    - Protect serpentine-based communities from erosion and high-impact uses that would degrade habitat values (including building roads).
    - Identify and restore degraded areas in serpentine-based communities.

- Management of Sensitive Plant Communities
  - Protect and preserve Federally and State-listed threatened and endangered species, those proposed for listing, and their habitats as required by law.

- Promote vigor, stability, and diversity in all vegetative communities
  - Reduce accumulated biomass
    - Reduce biomass accumulation to safe levels through methods including fire, limited grazing, or mowing.
    - Prohibit the use of aerial herbicide spraying to reduce biomass.
  - Manage invasive species
    - Limit invasive exotics to no more than 5 percent of the plant cover.
  - Monitor cover types
    - Following fuels treatment of fire and non-fire, monitoring plans should be developed and implemented annually to evaluate the actual condition versus the desired condition.
  - Re-vegetate degraded areas
    - If monitoring reveals vegetation is declining or has been damaged by disturbance, re-vegetating the area in native plant cover may be necessary.

Wetlands and Riparian Vegetation Element

- Protect wetland and riparian habitats of species legally listed or proposed for listing under the federal and state Endangered Species Acts by implementing obligatory requirements.
- Conserve wetland and riparian habitat by minimizing disruption and loss.
- Enhance wetland and riparian habitat values, features and diversity.
- Restore habitat values of damaged areas through revegetation and reclamation.
- Prevent degradation of wetlands and riparian zones by establishing 150-foot wide Wetland/Riparian Buffer Zones on each side of perennial riparian corridors and wetland areas in elevations above the 1000 foot reservoir water level.
- Use low-intensity prescribed burns or hand clearing for establishing fuel breaks within Wetland/Riparian Buffer Zones.
- Piling and burning of vegetation within Wetland/Riparian Buffer Zones is prohibited.
- Minimize disruption of riparian cover that becomes established within the reservoir fluctuation zone.

Wildlife Element

- Protect wildlife species and habitats legally listed or proposed for listing under the federal and state Endangered Species Acts by implementing obligatory requirements.

- Conserve sensitive wildlife habitats by minimizing disruption and loss.
- Enhance wildlife habitat values, features and diversity.
- Restore wildlife habitat values of damaged areas through revegetation and reclamation.
- Restrict all vehicles to designated roads unless authorized.
- Conduct prescribed burns to improve deer winter range conditions.

Fisheries Element

- Protect and enhance cold and warm water fishery resources.

Cultural Resources Element

- Protect and manage historic and prehistoric properties from damage or loss and encourage interpretative uses where appropriate.
- Protect prehistoric and historic properties by avoidance where appropriate.

Grazing Element

- Manage grazing as a permitted activity subordinate to the needs of fuels reduction, water quality and habitat protection.
- Employ season and intensity of livestock use to meet fuels reduction and resource protection goals.

Public Safety Element

- Inform visitors of fire activity in the area including suppression and prescribed burns through the use of personal contact, announcements, signs, and news articles.
- Ensure adequate closure of all unsafe or potentially hazardous areas.

Mineral and Material Resources Element

- Ensure all personnel involved with suppression or fuels treatment activities are aware of mine locations that pose a threat to foot and vehicle travel.

Trespass and Unauthorized Use Element

- All fences, signs, enclosure, etc. that is removed to safely treat an area for fuels reduction or for fire suppression must be replaced at the conclusion of the project or fire.

Hunting and Recreational Shooting Element

- During hunting season ensure personnel are aware of armed hunters that may be around and if necessary request the area be closed to firearms until personnel have completed the project or the conclusion of the fire.

Water Quality Element

- Manage lands and activities for water quality protection and improvement.
- Where possible design roads, fuel breaks, and fire breaks to follow the natural topography, minimizing steep slopes and the number of stream crossings.
- Stabilize and waterbar all roads and firelines where erosion is a problem.
- The use of pesticides, herbicides, and fertilizers on Reclamation lands shall be minimized.
- Prescribed burning should be planned in such a way as to minimize water quality impacts.
- Utilization of natural or in-place barriers where appropriate to minimize fireline construction where excessive erosion will result.
- Minimize the use of bulldozing firelines in high erosion areas. If unavoidable, construct on contour or stabilize with waterbars to control erosion.
- Minimize pollution resulting from wildfire suppression while recognizing safety and operational priorities of fighting wildfires.
- Revegetate burned areas with adapted herbaceous species.

Jurisdictional Issues and Coordination Element

- Inform cooperators of changes to maps by the acquiring or disposal of Reclamation lands.
- Ensure CDF-TCU has updated maps for fire suppression annually.

Interpretive Program Element

- Develop interpretive programs to educate the public on New Melones Lake resources including fire and fuels reduction projects.
- Provide information to visitors to improve their experience at New Melones Lake and to increase their awareness of natural resource values and protection including the use of fire and fuels reduction projects.

Fire Management Element

- Reduce fire hazards that threaten life and property.
- Fire Suppression
  - Suppress fires that threaten life, private property, public safety, and improvements.
  - Protect sensitive areas from inappropriate fire.
  - Provide suppression oversight to cooperating agencies.
  - Protect sensitive cultural resources.
- Fire Prevention and Education
  - Employ fire prevention strategies that reduce human ignition occurrence in campgrounds and transportation corridors.

  - Open campfires are limited to designated overnight campgrounds and within provided fire rings and pedestal grills.
  - Educate the public as to fire's natural role in ecosystems.
  - Work with communities, fire safe councils, and other agencies to identify hazards and risk mitigation strategies.

- Ecological Processes
  - Protect riparian/wetland areas and improve degraded vegetation for long-term health.
  - Manage for healthy populations of native wildlife in their natural habitat.
  - Manage the habitat for Special Status Species of plants and animals to maintain viable populations and the ecosystems upon which they depend.
  - Manage land treatments to conserve site moisture and to protect long-term stream health from increased runoff damage.
  - Establish a fire effects monitoring system that inventories pre-burn species composition and resulting post fire response, over time.

- Fuels Management
  - Use prescribed burns where there is no threat to life or property and ecological benefits would result from burning.
  - Maintain air quality to meet or exceed applicable federal and state standards and regulations.
  - Reduce fire risk to Wildland Urban Interface (WUI) communities.
  - Restore and maintain the structures, species composition, and processes of native ecological communities and existing ecosystems.
  - Use management tools such as mechanical thinning, prescribed fire, biological, cultural, and/or chemical treatments to make forests dominated by shade-intolerant species more resilient to fire, insects, and disease.
  - Use fire as a management tool to improve the ecological condition of the project area.

- General polices and action items:
  - The results of prescribed burns must be consistent with the vegetation management goals, regardless of the fire management goals.
  - Fuelbreak and firebreak designs should consider objectives for vegetation management.
  - Grass and brush clearances adjacent to roads and in recreation areas should be consistent with the objectives for vegetation management and legally protected plants.
  - Retain mature oaks in fuelbreaks for their importance to wildlife and aesthetic qualities.
  - Create a varied or feathered edge between fuelbreaks and burn units.
  - Retain clumps of unmodified vegetation in interior areas of fuelbreaks to provide habitat for wildlife and visual variety.
  - Use low-intensity controlled burns rather than firebreaks within Wetland/Riparian Buffer Zones.
  - If possible, use only air drops or hand crews during suppression in Wetland/ Riparian Buffer Zones. (300 feet wide).
  - Avoid, if possible, bulldozing vegetation in Wetland/Riparian Buffer Zones.

- Avoid grass and brush clearing in areas designated as sensitive plant communities (wetlands and serpentine-base communities).
- Retain sufficient vegetation for wildlife cover adjacent to cleared areas to discourage poaching of deer and other game species.
- Prohibit firewood collection, including dead and down wood, unless needed to reduce fuel loading in a specific area.
- Where fire is used to enhance forage production, prescribe the fire at an ecologically appropriate season and with an appropriate interval between burns to promote the health of the native plant community.
- Incorporate all applicable vegetation management objectives in the VMP into the FMP and every prescription.

III. WILDLAND FIRE MANAGEMENT STRATEGIES

A. General Management Considerations

In order to comply with direction provided in current National Fire Plan guidance, the 1995 New Melones Lake Draft RMP, and the interim Peoria Wildlife Area Management Plan, the New Melones Project Area's management and staff will implement the following fire management guidance:

- Provide for firefighter and public safety in all fire management activities.
- Reduce fire risk and hazardous fuels that threatens life and property.
- Protect communities, watersheds, sensitive and high risk areas from unwanted wildfire.
- Use fire and non-fire treatments to restore and/or sustain ecosystem health based on sound scientific principles and information, balanced with other societal goals, including public health and safety and air quality.
- Work closely with CDF Tuolumne/Calaveras Ranger Unit to implement an appropriate management response to wildfires that will provide for firefighter and public safety. When possible, fire suppression operations should be managed to minimize resource damage, control costs, and efficiently suppress high intensity, unwanted wildfire, considering benefits and values to be protected consistent with resource objectives, standards, and guidelines.
- Meet resource, watershed, wetlands, wildlife, fisheries, cultural and vegetation/fuels management goals and objectives through the appropriate use of fire and non-fire fuel treatments.
- When appropriate, use prescribed fire as a primary management tool to improve the ecological condition of natural ecosystems and maintain natural plant community diversity. Use non-fire treatments to achieve desired objectives when the use of prescribed fire is not a realistic or viable option.
- Work collaboratively with Communities-At-Risk and Communities-of-Interest within the WUI to develop plans for wildfire risk/hazard reduction. The list of Communities-At-Risk is available through the California Fire Alliance at http://www.cafirealliance.org/
- Work collaboratively with federal, state, and local partners to develop cross boundary management strategies and prioritize cross-agency fire management activities.
- Identify appropriate management response goals, objectives, and constraints by specific Fire Management Units (FMU) within the New Melones Project Area. All FMU-specific wildfire management activities will be implemented to reflect FMU guidance outlined in Chapter III, Section D.

As a federal land management agency, the Bureau of Reclamation, New Melones Project Area, anticipates the use of the National Fire Program Analysis as a planning and budget process when FPA Phase II is implemented. The following fire program planning elements are used in this FMP/Strategy approach, and are also used in the national interagency fire budget software program 'Fire Program Analysis' (FPA).

Fire Planning Unit (FPU)

The FPU defines a strategic-level geographic planning area. FPA uses the interagency FPU planning polygon as the basic geographic area for fire management analysis. The New Melones Project Area is located within California Interagency FPU #7. Below is listed the current federal agency partners within FPU#7.

California Fire Planning Unit (FPU) - Federal Agencies	
California FPU #7	Folsom Field Office, BLM
	San Luis National Wildlife Refuge Complex
	Yosemite National Park
	Sierra National Forest
	Stanislaus National Forest

Fire Management Unit (FMU)

The New Melones FMP identifies three distinct fire management units (New Melones, Stanislaus and Peoria FMUs). An FMU is any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major Fire Regime groups, and so on, that set it apart from the management characteristics of an adjacent FMU. Fire Management Units are scalable, and can be separated geographically. Each FMU should be unique as evidenced by resource management strategies, objectives and attributes.

The Federal fire management plan template policy states that each FMU should be assigned a classification type to define its primary resource management strategy. The types are:

- Wildland Urban Interface (WUI)
- Special Management Areas (SMA)
- Research Natural Areas (RNA)
- High Value Habitat (HVH)
- Cultural/Historic/Paleontological (CHP)
- Vegetation (VEG)
- Wilderness (WLD)

FMUs have dominant management objectives and pre-selected fire suppression strategies assigned to accomplish these objectives. Fire management objectives and suppression strategies for wildfire ignitions in the New Melones FMP are defined and measured in terms of containing unplanned ignitions. (*Note: see Chapter III, Section D for detailed strategy descriptions of the FMUs).* Wildfire tolerance is further defined and measured in terms of total allowable/desired burned acre targets over a 10 year period for each FMU.

B. Wildland Fire Management Goals

As stated in Chapter II, the New Melones Fire Management Plan will reflect the wildland fire management goals that are identified in the 1995/2001 Federal Wildland Fire Policy, the NFP, the Cohesive Fuels Treatment Strategy, and the 10 Year Comprehensive Strategy.

The 10 year Comprehensive Strategy provides a suite of core principles and fire management goals that identifies an aggressive, collaborative approach to reduce the threat of wildfire to communities and to restore and maintain land health.

The four primary goals

1. Improve Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restore Fire Adapted Ecosystems
4. Promote Community Assistance

The New Melones Project Area will conduct all wildland fire management actions in compliance with goals identified in the 1995 Federal Wildland Fire Policy and the 2001 Federal Wildland Fire Policy Update guiding principles. These goals are:

- Firefighter and public safety are the highest priority in every fire management activity.
- Assess risk to communities in terms of direct wildfire impact and economic values, and implement effective pre-fire programs and activities to mitigate that risk through collaborative planning and projects.
- Implement the full range of wildland fire and fuels management practices, including prescribed fire, mechanical, chemical, biological, and cultural treatments that will move all affected landscapes toward desired future condition as described in the RMP.
- Establish partnerships with all interagency cooperators to facilitate coordinated fire management activities.
- Keep CDF's Tuolumne/Calaveras Ranger Unit (TCU) informed and aware of all fire management decisions related to the suppression of wildfires in the New Melones Project Area.
- Encourage close coordination and collaboration among specialists within and among federal, interested organizations, private landowners, state, and local partners.

- Develop and use the best scientific information (including fire science, vegetation, ecology, watershed, public safety etc.) available to deliver technical and community assistance to support ecological, economic, and social sustainability.
- Allow prescribed fire to maintain, and enhance resources, and as nearly as possible be allowed to function in its ecological role when appropriate for the site and situation.
- Create an integrated approach to fire and resource management.

Specific fire management strategies and objectives for each Fire Management Unit (FMU) of the New Melones Project Area are outlined in Chapter III; Section D of the FMP.

C. Wildland Fire Management Options

Wildland fire management options for the New Melones Project Area will typically include the following:

- Wildfire Suppression – Aggressive Initial Attack/Extended Attack
- Prescribed fire
- Non-Fire Fuels Treatment that include mechanical, biological and chemical strategies
- Post Fire Rehabilitation and Restoration
- Community Assistance and Education, Fire Prevention and Rural Fire Assistance

The New Melones Resource Manager has the overall authority and statutory responsibility to provide for resource protection (including fire management and wildfire protection) and public safety on Reclamation lands within the New Melones Project Area. In executing wildfire protection responsibilities on Reclamation lands, the New Melones Resource Manager will provide an aggressive and continuous attack on all wildfires through a fire suppression agreement with CDF.

In exchange for administrative considerations and the long-term use of Reclamation's former construction management facilities, CDF TCU has agreed to provide all wildfire protection functions (initial attack and extended attack) on Reclamation lands in the New Melones Project Area as per an interagency fire agreement between Reclamation and CDF.

Because CDF has fire suppression responsibilities, Reclamation and CDF TCU will coordinate fire suppression responses and actions on all wildfires within the Project Area, with emphasis on; minimizing the loss of life and damage to private property, providing for firefighter and public safety, minimizing environmental damage due to suppression efforts, and keeping suppression costs relative to values at risk.

The use of tactical pre-fire planning and the annual operating plan will allow both Reclamation and CDF TCU managers to design preplanned wildfire responses that meet management objectives established in the New Melones RMP and FMP.

Ultimately, CDF has overall jurisdictional initial attack and fire suppression responsibilities on Reclamation lands, and will respond as equipment availability and immediate fire conditions warrant, and to the greatest extent possible, within the guidelines provided in this FMP, CDF Operational Policy, and the approved operating plan between CDF TCU and Reclamation.

D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU)

There are three FMUs within New Melones Project Area; the New Melones FMU, the Stanislaus FMU, and the Peoria FMU.

Fire and Resource Management Goals Common to All New Melones Project Area FMUs

- Suppress all wildfires through aggressive attack.
- Reduce hazardous fuel loads, with emphasis on wildland urban interface (WUI) areas, high value infrastructure and critical watersheds.
- Implement post-fire rehabilitation activities to ensure that water quality, potential for invasive species, native species diversity, and resource values are taken into consideration. Native species will be used, as appropriate, for post-fire rehabilitation/re-vegetation actions.
- Protect Water Quality Resources:
  - Manage lands and activities for water quality protection and improvement
- Protect Wildlife Resources:
  - Protect wildlife species and habitats legally listed or proposed for listing under the federal and state Endangered Species Acts
  - Conserve sensitive wildlife habitats by minimizing disruption and loss
  - Enhance wildlife habitat values, features and diversity
  - Restore wildlife habitat values of damaged areas through re-vegetation and restoration
- Protect Wetlands, Riparian Areas and Sensitive Vegetation Resources:
  - Protect wetland, riparian areas, sensitive plant species and other associated habitats of species legally listed or proposed for listing under the federal and state Endangered Species Acts
  - Conserve wetlands, riparian habitat and sensitive plant communities by minimizing disruption and loss
  - Enhance wetland, riparian and other habitat values, features and diversity
  - Restore habitat values of damaged areas through re-vegetation and restoration
- Protect Fisheries Resources
  - Protect and enhance cold and warm water fishery resources
- Protect Cultural Resources
  - Protect and manage historic and prehistoric properties from damage or loss

  - Protect sensitive cultural resources by using Minimum Impact Suppression Tactics (MIST) and by coordinating with a Cultural Resource Advisor during fire suppression activities.

- Protect Soil Resources
  - Design and implement emergency stabilization and rehabilitation efforts to achieve soil stability and watershed protection objectives.
  - Implement aggressive rehabilitation actions in severely burned areas that are susceptible to erosion and conversion to invasive species. Native species will be used, as appropriate, for post-fire re-vegetation actions.
  - Locations for structures and routes for fire access roads and motorized fuel breaks will be selected to avoid areas with high potential for slope failure.
  - Stabilize steep slopes to minimize erosion, sedimentation, and water quality degradation and to prevent further damage to critical watershed functions.
  - Re-establish plant cover in a manner that will replicate the prior natural state and to help protect exposed soils.
  - Design, place and maintain fire management-related fuel breaks and fire access roads in a manner that will help mitigate soil compaction, sedimentation and erosion potential.

- Protect Air Resources
  - The overall air resource protection goal is to maintain or improve air quality to in a manner that meets the requirements of the Federal Clean Air Act.
  - The goals of air resource management in the New Melones Project Area is to mitigate air pollutants related to fire management activities and to cooperate with the California Air Resources Board and the Mountain Counties Air Basin District in monitoring and managing/regulating air pollution sources.
  - Air quality management emphasis will be placed on mitigating air quality-related impacts to adjacent communities and visibility-related impacts to transportation corridors within the Project Area.
  - Reclamation prescribed burn plans will be submitted and approved by the Mountain Counties Air Basin District, and will assure that predicted emissions from each burn will not exceed the National Ambient Air Quality Standards (NAAQS).

Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs

In order to comply with direction provided in current National Fire Plan guidance, the New Melones Project Area Manager, CDF Tuolumne/Calaveras Ranger Unit and other cooperating agencies will work collaboratively with regional partners in fire and resource management activities across agency boundaries to achieve the following fire management objectives, strategies, goals, and actions:

General Fire Management Guidelines

As previously stated, the protection of human life is the first and most important consideration in all wildfire events and suppression actions. The safety of the public and firefighters is of

primary importance. All fire management actions whether they are related to fire suppression, fuels treatment, community education and assistance, or emergency stabilization and rehabilitation will be conducted in a manner consistent with public and firefighter safety as the highest priority.

Protection of private property and infrastructure within at-risk WUI areas and the protection of high value watersheds will be a high priority. To this end, the Reclamation will participate with CDF TCU and other cooperative agencies within Tuolumne and Calaveras counties to work collaboratively with local communities at risk, and to develop joint agency plans for landscape risk and hazard reduction activities.

In addition, Reclamation's New Melones resource managers will use fire and non-fire vegetation treatments as management tools to restore and/or sustain ecosystem health, improve the ecological condition/productivity of range ecosystems, and maintain natural plant community diversity. Fire management guidelines identified in the FMP will allow fire (and fire surrogates) to function in its ecological role, as appropriate, to protect, maintain, and enhance resource values and fire dependent/adapted vegetation communities within high value watersheds.

Fire Suppression

Reclamation, through an existing fire protection agreement CDF TCU, will provide for fire protection and suppression of all wildfires that occur within the fire management jurisdiction of the New Melones Project Area boundary. Reclamation will also identify initial attack objectives, and any management constraints by specific Fire Management Units (FMU).

Under the current policy, human caused fires will always be suppressed. Other general fire suppression guidelines are as follows:

Wildfire Suppression/Protection Priorities:

- The protection of human life and the provision of firefighter safety will always have the highest priority.
- Operational emphasis will be placed on firefighter and public safety, minimizing the loss of life and damage to private property and minimizing environmental damage that result from suppression efforts.
- The intensity of fire suppression effort will reflect a response consistent with human and resource values at risk.
- 100% protection of adjacent communities and resource/social values at risk from unwanted wildfire. Community and resource/social values specifically include:
  - Wildland Urban Interface
  - Watershed values and water quality
  - Critical wildlife habitat
  - Community and regional economic infrastructure
  - Recreational uses

- Fires on Reclamation land will be managed to remain on Reclamation land whenever possible. Aggressive initial attack objectives will be developed to minimize the fire potential to crossover on to private or other agency land.
- Existing natural and human made barriers (i.e. roads, trails, rock outcroppings, riparian areas) will be utilized when feasible during wildfire suppression operations.
- Protect fire-sensitive areas from inappropriate or undesired wildfire.

Wildfire Suppression Strategies:

- Once the FMU's decadal wildfire acre-burned target has been reached, from either wildfire or prescribed fire, a review of the FMU objectives and strategies will be initiated to develop new suppression criteria for wildfire events.
- All fire suppression/management activities will consider safety of personnel and the public as the highest priority.
- Wildfires will be aggressively suppressed using a mix of the following methods:
  - Aerial attack, including helicopters, air tankers, and helitankers.
  - Hand crews
  - Engines and water tenders
  - Use of foam and/or fire retardant.
  - Earth-moving equipment (dozers) will be used to protect life, property, and natural resources as appropriate.
- New Melones Project Area suppression strategies encourage the aggressive use of air resources, engines and hand crews during fire suppression activities, whenever possible. Heavy equipment (dozers, etc.) should be used when the disturbance impacts of the equipment are outweighed (or potentially outweighed) by direct and indirect impacts to watershed functions and other resource values.
- CDF TCU will notify the Reclamation's Duty Officer of all fires on or threatening Reclamation lands within the New Melones Project Area.
- As appropriate, and as defined within the operating plan, the CDF incident command team will request and work closely with, a Reclamation Agency Representative/Resource Advisor for all wildfires exceeding or expected to exceed initial attack suppression efforts.
  - A Reclamation Agency Representative (AREP) will be assigned to significant wildfires and work with the CDF Incident Commander and/or the Incident Management Team in the development of fire suppression strategies.
  - The Reclamation AREP will assign a Resource Advisor(s) and/or Environmental Specialist(s) (ENSP) as appropriate. The Reclamation Agency Representative will also coordinate suppression efforts with all available New Melones Project Area resource specialists, as appropriate.
- In the case of a wildfire that escapes initial attack, a Wildland Fire Situation Analysis (WFSA) will be completed to determine the complexity level and identify suppression alternatives. When analyzing alternatives, consideration should always be given to least cost suppression tactics as long as other resource objectives can be met. Federal policy

stipulates that a Wildland Fire Situation Analysis (WFSA) is required for all fires that are not contained within the first burning period.
  - CDF and the Reclamation Agency Representative will coordinate in the development of a WFSA on fires extending beyond initial attack. The WFSA will be updated by operational shift as necessary.

Wildfire Suppression Constraint Strategies:

- Regardless of constraints, all fire suppression/management activities will consider safety of personnel and the public as the highest priority.
- Avoid using heavy equipment in the river corridors and riparian areas.
- Restrict retardant use within 200 feet from the Stanislaus river corridor.
- Use Minimum Impact Suppression Tactics (MIST) in areas where cultural resources exist and are vulnerable to surface disturbance.
- Prevent unacceptable impacts to Special Status Species, cultural resources, and sensitive sites.
- Fire suppression strategies should be tailored to address areas of significant constraints including critical habitat for wildlife, T&E species, areas of soil instability, areas of other critical resource constraints (cultural), and where plant communities are at risk due to current conditions/times of year or other ecological constraints.
  - Actions will be taken in these identified areas to protect the sensitive sites from damage by heavy mechanized equipment.
- In areas where there are know or suspected sensitive sites, a Reclamation Agency Representative /Resource Advisor will be assigned to all wildfires to work with the CDF Incident Commander and/or Incident Management Team to identify areas of known or suspected ecologically sensitive sites. Actions will be taken in these identified areas to protect the sensitive sites from damage by heavy mechanical equipment.
- In cases where wildfires are or may threaten known high value cultural resource sites, employ all available suppression and resource protection measures to avoid loss to the site. CDF will promptly notify the Reclamation Agency Representative.
  - The Reclamation Agency Representative will coordinate notification of the New Melones Resource Manager and archaeologist. The Reclamation Agency Representative will assess resource concerns and coordinate with CDF as necessary.
  - The Reclamation Agency Representative will coordinate suppression efforts in culturally sensitive sites with the Reclamation /New Melones Archaeologist.
- In non-initial attack/multiple-burning period fire situations, the request for an archaeologist to be available on-scene should be submitted prior to any significant heavy equipment use in cultural resource areas sensitive to surface disturbance.
- In emergency circumstances, where heavy equipment was employed without prior on-site coordination, Reclamation will conduct post-fire archaeological evaluations to assess and document equipment damage to cultural resources.

Fire and Non Fire Fuels Treatments

Fire (prescribed fire) and non-fire fuels treatments (mechanical, chemical, and biological) will be developed and implemented in order to create fire safe communities, protect private property, achieve resource management objectives, as well as restoring and maintaining the structures, species composition, and processes of native ecosystems. Where appropriate, vegetation management projects will be developed in a collaborative manner consistent with the 10-Year Strategy Implementation Plan (2002). As appropriate, resource managers will incorporate applicable vegetation management objectives identified in the Vegetation Management Plan for New Melones Lake into fire and non-fire treatment prescriptions.

Municipal watersheds and wildland urban interface (WUI) areas are of great concern to the Bureau of Reclamation, and will be considered as high priorities for fuels treatment projects. These WUI areas are identified in the Communities at Risk section of each FMU description. Additional collaborative project level planning will be completed prior to implementation of fuels management actions. Additional at-risk areas and projects may be identified through a joint-agency, landscape-scale collaborative process on a case-by-case basis.

Fuelbreaks and firebreaks will be designed in a manner that minimizes impacts to aesthetic, scenic, and ecological resources, and consider resource objectives for vegetation management, wildlife habitat management, soil stabilization, public safety, ignition sources, and safety of fire-fighting personnel. Emphasis will be to create fuelbreaks with blended or feathered edges through selective thinning and by cutting indentations in brush to create bays. Interior areas of the fuelbreaks should retain clumps of unmodified vegetation to provide cover and food for wildlife and create interest and variety in the landscape. Retention of oak trees is especially desirable. Mature oaks will be retained in fuelbreaks for their wildlife benefits and scenic qualities.

Projects will be also be designed to ensure that vegetation management treatments conserve site moisture and protect long-term stream health from increased runoff damage. Within wetland/riparian buffer zones, fuel treatment projects will be designed to use low-intensity/low-impact hand treatments and/or prescribed fire, rather than constructing large firebreaks with heavy equipment.

Fuel hazard reduction activities will be designed and implemented to maintain adequate grass and brush clearance directly adjacent to high use roads and in Reclamation recreation areas during the fire season, consistent with Vegetation Management Plan for New Melones Lake objectives and special status plant requirements. Vegetation in those areas outside of fuel treatment project perimeters will retain sufficient wildlife cover to discourage poaching of deer and other game species.

Prescribed burns and non-fire fuel treatments will be reseeded, as appropriate, using native species to the extent practical, wherever residual vegetation is not adequately abundant to revegetate the sites naturally, to prevent domination by invasive weed species, and to meet ecosystem and watershed health/restoration objectives. Where fire is used to enhance forage

production, prescribe the fire at an ecologically appropriate season and with an appropriate interval between burns to promote the health of the native plant community.

Prescribed Fire Objectives:

- Use fire as a management tool to improve the ecological condition of the project area.
- Treatment emphasis and priorities will be given to critical WUI areas, high value watersheds, high value habitat, and developed recreational areas.
- An interdisciplinary approach will used to determine the best site-specific prescribed fire treatments to accomplish fuels reduction and other resource goals and objectives.
- The objectives and results of prescribed burns must be consistent with the vegetation management goals, regardless of the fire management goals.
- Prescribed fire will be used as a tool to meet resource management objectives and to reduce surface fuels in areas of fuel reduction projects
- As appropriate, use prescribed fire to reduce hazardous fuel loadings in order to mitigate fire intensity levels. This will minimize negative fire effects on natural and cultural resources in the unit.
- Prescribed fire will be used to reduce the future need for aggressive suppression activities by the development of prescribed fire strategies that reduce or eliminate risk to life, property and natural resource values.

Prescribed Fire Strategies:

- Future prescribed fire projects and acre-targets will be re-evaluated if and when the FMU desired burned acreage target is reached through unplanned ignitions.
- Prescribed fire smoke emissions will remain within those allowed by state and local air quality regulators.
- Prescribed fire treatments should be designed to break up continuous fuel beds and concentrations of dead or decadent fuels.
- Prescribed fire should be planned and executed to promote a mosaic pattern of numerous and irregular shaped burned areas, colonized by early and mid-successional stage vegetation.
- Conduct appropriate pre-treatment surveys (archaeological, botanical, etc…) to ensure no unintended loss of resource values.
- Conduct post-treatment surveys for increases in non-native plant species.
  - If non-native species cover **exceeds 5%** in treated areas, implement appropriate eradication measures, as determined by an interdisciplinary treatment plan.

Prescribed Fire Air Quality Strategy:

- New Melones personnel will work closely with the Mountain Counties Air Basin District personnel to ensure prescribed fire emissions stay within permitted levels.

- Develop and implement a smoke management plan for each prescribed burn.
- Plans are required to be approved by the Mountain Counties Air Basin District, and must assure that predicted emissions from each burn will not exceed the National Ambient Air Quality Standards (NAAQS).

Prescribed Fire Monitoring Strategy:

- All prescribed fires will have on-site monitoring during the operational period to collect fire behavior and weather data.
- Photo points will be established pre-burn.
- Data will be collected immediately post-burn for initial estimate of consumption of fuels and attainment of resource objectives.
- Long-term post burn monitoring should include identification of vegetation species and the presence of invasive non-native species.

Non-Fire Fuels Treatment Objectives:

- Treatment emphasis and priorities will be given to critical WUI areas, high value watersheds, high value habitat, and developed recreational areas.
- An interdisciplinary approach will be used to determine the best site-specific non-fire fuels treatments to accomplish fuels reduction and other resource goals and objectives.
- Mechanical treatments will be utilized on Reclamation lands along the wildland urban interface to reduce fuel loadings and create fuel breaks to serve as control lines for prescribed burns and unwanted wildfires.
- Reduce hazardous fuel loadings in order to reduce fire intensity levels which will minimize negative fire effects on natural and cultural resources in the unit and mitigate the potential for catastrophic fires.
- Reduce the future need for high cost, aggressive suppression activities by the development of non-fire treatment fuels management strategies that reduce hazard and mitigate risk to life, property and high value watersheds.

Non-fire Fuels Treatment Strategies:

- Fuels treatments using non-fire means will be utilized in those situations where, due to current high fuel loading, the use of prescribed fire would create artificially high fire intensity levels that may result in severely damaged soils, watershed functions, or loss of desired plant species.
- Non-fire treatments will serve to somewhat mimic fires' function, in that they will remove a large portion of the biomass accumulation from the landscape, thus allowing a better opportunity in subsequent years for follow up treatments using lower intensity prescribed fire.
- Conduct appropriate pre-treatment surveys (archaeological, botanical, etc…) to ensure no unintended loss of resource values.

- Use of herbicides as a vegetation treatment option will be carefully examined, for potential impacts to water sources, wildlife habitat, and cultural/traditional uses.
- Conduct post-treatment surveys for increases in non-native plant species.
  - If non-native species cover **exceeds 5%** in treated areas, implement appropriate eradication measures, as determined by an interdisciplinary treatment plan.

Non-Fire Treatment Monitoring Strategy:

- Initial project monitoring data will be collected immediately after the treatment for initial estimate of reduction of fuels and attainment of resource objectives.
- Long-term post treatment monitoring should include identification of vegetation species and the presence of invasive non-native species.

Community Assistance, Education and Fire Prevention

Community education and assistance activities will be conducted in collaboration with cooperating agencies and local fire safe councils to create fire safe communities, prevent catastrophic impacts on sensitive natural resources, and educate the public on the natural role of fire in Sierra foothill ecosystems.

Community Protection/Community Assistance Objectives:

- Increase public awareness, participation, and cooperation pertaining to the mitigation of fire threats in the WUI.
- Educate area population on the basic principles of fire ecology and fire's role in the environment.
- Build public support for fuels reduction efforts in and around Reclamation lands adjacent to wildland urban interface areas.
- Collaborate with CDF Tuolumne/Calaveras Ranger Unit, local fire departments and fire safe councils regarding federal grants available to communities at-risk.
- Develop and implement collaborative mitigation and prevention strategies with communities at risk.
- Reduce the risk of human caused wildfires, with emphasis on fires caused by recreational activities.

Community Protection/Community Assistance Strategies:

- Support and encourage the formation of fire safe councils in all communities at risk.
- Work collaboratively with local communities, CDF and other agency partners to develop and update county-wide Community Wildfire Protection Plans (CWPP). Amend Reclamation's New Melones Project Area's program of work to reflect and incorporate mitigation/prevention recommendations and action priorities developed by and outlined in the county-wide CWPP.

- Present fire ecology information to local and special interest groups to help enhance the understanding and support of Reclamation's fire management objectives and implementation activities.
- Provide informational brochures and materials on reducing fire risks to local communities and creating defensible space for those homeowners that are near or adjacent to Reclamation lands.
- Participate with other agencies in providing fire safe education and residential assessments to adjacent homeowners.
- Support and participate in interagency presentations to local homeowner groups explaining "Defensible Space" and related fire prevention safety and risk mitigation activities.

New Melones Fire Prevention Strategies:

- Employ cause-specific fire prevention activities to reduce human ignition, with special emphasis in wildland-urban interface areas, Reclamation's developed campgrounds, shoreline recreations areas, and adjacent high-use transportation corridors.
- Limit open campfires to designated overnight campgrounds and within provided fire rings and pedestal grills. Prohibit open fires in all areas during periods of Interagency Fire Restrictions.
- Work with Reclamation's New Melones Ranger and recreation staff to ensure recreation and high use areas are patrolled and that fire prevention/education signs are posted and maintained.
- Provide yearly fire prevention outreach/education materials to Reclamation personnel and offices offering campfire permits and general camping safety information to the public.
- Provide CDF Tuolumne/Calaveras Ranger Unit fire restriction and emergency closure information to Reclamation personnel and the public.

Post Fire Stabilization and Rehabilitation:

Emergency stabilization and rehabilitation efforts will be designed and implemented to achieve vegetation, habitat, soil stability, and watershed objectives. Aggressive actions will be taken in burned areas susceptible to erosion and conversion to invasive species. Native species will be used, as appropriate, for post-fire re-vegetation actions.

Post Fire Stabilization, Rehabilitation and Restoration Objectives and Strategies:

Fire damages resulting from wildfires have two forms: short-term suppression activity damage and long-term resource damage. Suppression action damages may be the result of suppression operations; resource damages are a result of the fire itself as it relates to damage to the natural resource.

- Protect water quality and prevent further damage to critical watershed functions.
- Stabilize steep slopes to minimize erosion, sedimentation, and water quality degradation.

- Rehabilitate burned areas to mitigate the adverse effects of wildfire on soil and vegetation in a cost-effective manner and to minimize the possibility of wildfire recurrence or invasion of weeds.
- Post-fire rehabilitation and/or restoration will emphasize the re-establishment and perpetuation of habitat diversity and the reduction of undesirable, invasive non-native annual grass establishment and proliferation.

Emergency Stabilization & Rehabilitation (ESR) Strategies:

Emergency stabilization and rehabilitation (ESR) involve short term actions to stabilize burned areas and mitigate suppression activity damage. This includes also replacing equipment and infrastructure that was directly damaged or destroyed by fire suppression actions. ESR strategies for New Melones Project Area include the following:

- Identify immediate emergency rehabilitation actions to prevent further land degradation or resource loss.
- All firelines will be rehabilitated to natural condition.
- Post-suppression mitigation shall include re-establishing drainage, removing trash, rehabilitation of firebreaks and other ground disturbances, and obliteration of vehicle tracks sufficient to discourage future casual use and erosion.
  - Actions must be taken within one year following containment of a wildfire
- Repair, replace, or construct physical improvements damaged by suppression actions.
- Repair minor facilities damaged by fire suppression actions.
  - Actions must be taken within three years of containment of a wildfire
- Consult with staff archaeologist, botanist, wildlife biologist, and other staff specialists to evaluate fire and suppression operations effects and determine if additional restoration is necessary.
- Ensure that equipment and emergency stabilization material, e.g., straw etc… meets federal requirement and are certified weed-free.
- Low-impact equipment should be used for ESR activities whenever appropriate.

Long-term Post Fire Restoration and Re-vegetation Strategies

Resource damage restoration/rehabilitation and post fire re-vegetation typically involves long-term post incident actions. Post-fire rehabilitation, restoration and/or re-vegetation requirements should be considered for large, high intensity fires that occur within high value, critical watersheds. USDI policy requires agency-standard fire rehabilitation plans prepared for those fires requiring complex rehabilitation and restoration/re-vegetation efforts. Post-fire rehabilitation is typically considered on a case-by-case basis depending on the location of the fire and resources to be protected.

Other post-fire rehabilitation considerations include:

- Post-fire rehabilitation and/or restoration is generally deemed necessary or desirable, when resource specialists identify a need for large-scale slope stabilization efforts and/or the re-establishment of appropriate, site-specific native plant species over large, high intensity burn areas.
- The need to restore or re-vegetate fire-damaged lands unlikely to recover naturally.
- Repair, replace, or construct physical improvements necessary to prevent degradation of land or resources.
- Stabilize and prevent unacceptable degradation to natural and cultural resources.
- Minimize threats to life and property resulting from the effects of a fire.
- Ensure that long-term rehabilitation material, e.g., seed, straw etc… meets all federal requirements and is certified weed-free.
- Long term rehabilitation could involve the use of an ESR (BAER) team on larger fires.
- Long term rehab may include repairs to structures (fences, signs, windmills, etc.) and construction of temporary fences to exclude people and livestock from burned areas.

Monitoring

Increased emphasis will be placed on natural resource objectives for each fire and fuels treatment. A monitoring and evaluation program will be established to determine the effectiveness of the management implemented. This will include the purposeful collection and analysis of data to determine the results of implementing management actions. It will require monitoring for both pre and post-fire environmental conditions. This information will be used to adjust management determinations. Adjustment in fire and fuels management practices based on sound scientific monitoring and analysis will be consistent with this plan amendment.

Environmental Analysis (NEPA)

Current standard operating procedures for environmental analysis will be followed. Each proposal for a prescribed burn or non-fire fuels treatment will be further analyzed in a project specific environmental analysis (CX, EA, DNA) as appropriate.

NEPA Documentation for Hazardous Fuels Reduction Activity- Categorical Exclusion

This NEPA approach is appropriate for use in the New Melones Project Area. Reference "NEPA Documentation Needed for Fire Management Activities; Categorical Exclusions" in the Federal Register, June 5, 2003, for additional NEPA-related information. Projects that qualify under this specific NEPA categorical exclusion must meet the following conditions:

For hazardous fuels reduction activities conducted under a Categorical Exclusion, these activities:

- Will not be conducted in wilderness areas or where they would impair the suitability of wilderness study areas for preservation for wilderness;

- Will not include the use of herbicides or pesticides;
- Will not involve the construction of new permanent roads or other infrastructure;
- Will not include sales of vegetative material that do not have hazardous fuels reduction as their primary purpose;
- Will not exceed 1,000 acres for mechanical hazardous fuels reduction activities and will not exceed 4,500 acres for hazardous fuels reduction activities using fire;
- Will only be conducted in wildland-urban interface or in Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside the wildland-urban interface.

New Melones Project Area – Landscape-Scale Fire Management Information

The following maps and statistical data provide fire management information for all lands within the New Melones Project Area and serve to define fire management issues and physical characteristics in a more landscape context.

Maps:

- New Melones Project Area Fire Management Units (FMUs)
- New Melones Project Area Fire Management Units (FMUs) by FMU
- New Melones Project Area Fire Occurrence by FMU
- New Melones Project Area Vegetation by FMU

Statistical Summaries:

- New Melones Project Area Fire Management Unit (FMU) Types
- New Melones Project Area Fire Management Objectives by Fire Management Unit (FMU)
- New Melones Project Area Decadal (1994-2003) Fire History by FMU
- New Melones Project Area Ignitions by Size Class (1994-2003)
- New Melones Project Area Fire Acres by Year (1994-2003)

New Melones Project Area Fire Management Unit Types		
FMU Number	**FMU Name**	**FMU Category/Type**
01	New Melones FMU	WUI & High Value Watershed
02	Stanislaus FMU	Watershed/WUI
03	Peoria FMU	High Value Habitat/WUI

The following table summarizes the quantifiable Fire Management Objectives presented by FMU.

New Melones Project Area Fire Management Objectives by Fire Management Unit (FMU)						
FMU Number	**Wildfire Desired IA Success**	**Wildfire Decadal Goals (Acres)**	**Decadal Wildland Fire Use (Acres)**	**Decadal Rx Fire (Acres)**	**Decadal Non-Fire Treatments (Acres)**	**FPA Suppression Priority***
01	< 1 ac. @ 90%	250	N/A	500	1,000	1
02	<10 ac. @ 90%	1,000	N/A	1,500	100	2
03	<10 ac. @ 90%	500	N/A	1,500	750	3

FMU Ignition and Fire History Analysis: Fire occurrence information is derived from CDF Fire Reports, and also includes fire reports for those Reclamation fires where USFS was the jurisdictional agency.

New Melones Project Area Decadal Fire History by Fire Management Unit (FMU)				
FMU Number	**Decadal Number of Fires (94-03)**	**Largest Fire Acres (94-03)**	**Decadal Average Acres (94-03)**	**Decadal Total Acres (94-03)**
01	57	3,212	91	5,186
02	42	14,280	384	16,144
03	11	6	10	10

New Melones Project Area Ignitions by Size Class (1994-2003)				
Size Class (Acres)	**Number of Fires**	**Largest Fire (Acres)**	**Average Fire Size (Acres)**	**Total Acres Burned**
A (0.0 - 0.2)	57	0.2	0.05	3
B (0.3 - 9.9)	37	8	2	81
C (10 - 99.9)	6	25	17.5	105
D (100 - 299.9)	4	210	176	710
E (300 - 999.9)	3	700	566	1,700
F (1000 - 4999.9)	2	3,212	2,231	4,462
G (5000+)	1	14,280	14,280	14,280

New Melones Project Area Fire Acres by Year (1994-2003)				
Year	**Number of Ignitions**	**Largest Fire (Acres)**	**Average Fire (Acres)**	**Total Acres**
1994	14	700	54	754
1995	8	3,212	401	3,214
1996	19	1,250	114	2,174
1997	7	4	1	5
1998	8	25	3.8	30
1999	18	100	7.6	138
2000	15	700	48	724
2001	8	14,280	175	14,285
2002	12	8	1	13
2003	1	1	1	1

New Melones Reservoir
Fire Management Units

Stanislaus-FMU

New Melones FMU

Peoria FMU

NEW MELONES RESERVOIR

Area of Detail

New Melones Reservoir

Prepared by Envrionmental Restoration Technology Ltd.

0 1.5 3 Miles

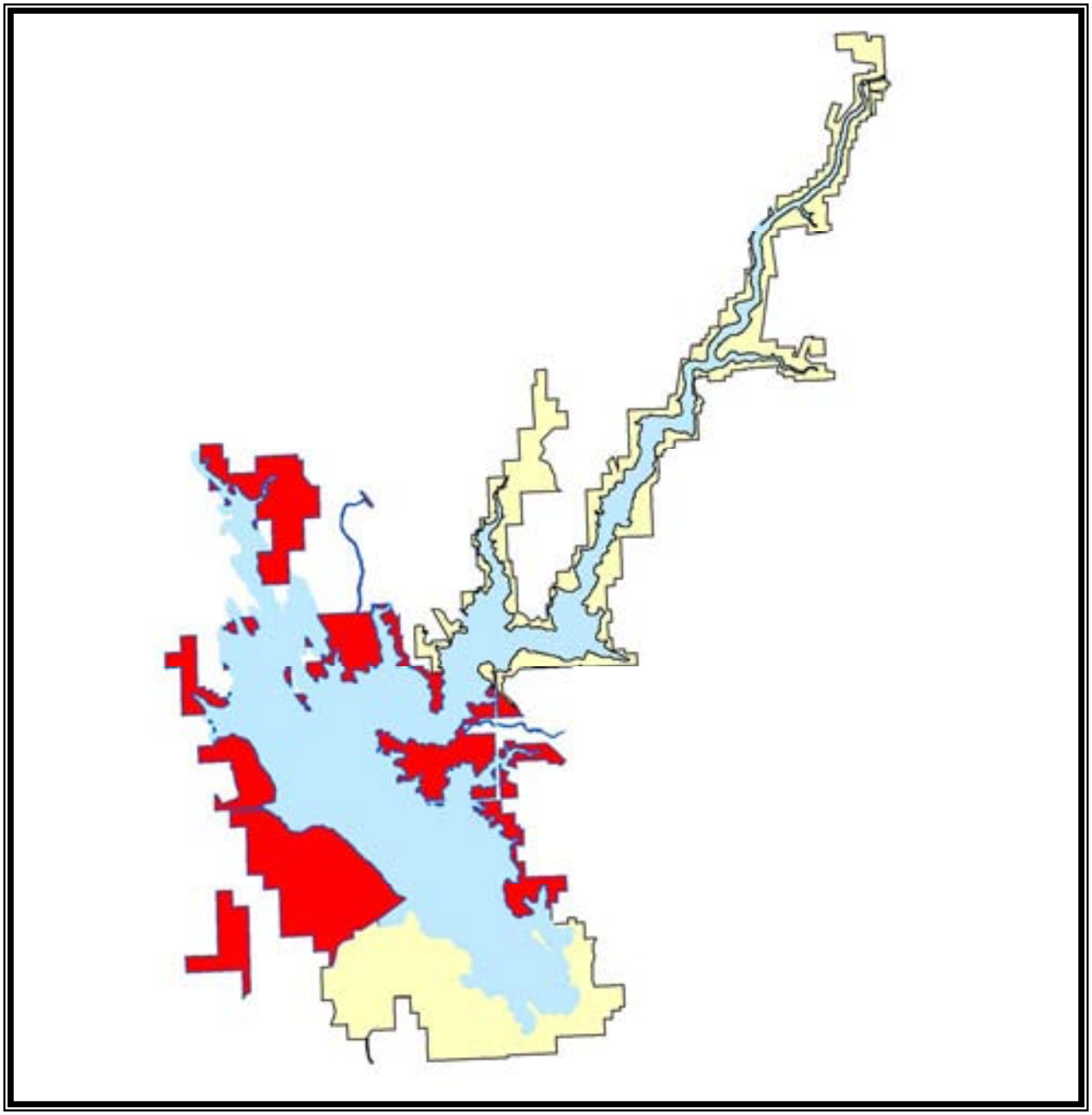
Legend

- New Melones FMU
- Stanislaus FMU
- Peoria FMU
- Road
- Cities
- New Melones Reservoir

Agency

- Bureau of Reclamation
- Bureau of Land Management
- State
- US Forest Service
- Private

01 - NEW MELONES FMU



FMU I.D.: 01 - NEW MELONES

1. FMU Type: Wildland Urban Interface and High Value Watershed

2. FMU Location Information

Geographic boundaries

- Angels Camp and Highway 4 to the North
- Table Mountain and Highway 49 to the East
- Lightner Peak and Obyrnes Ferry Road to the West
- Peoria FMU and Stanislaus River to the South

3. FMU Area Acre Total: Bureau of Reclamation Ownership: **6,589 acres**

4. FMU Characteristics

Topography

- **Elevation Range:** 600 - 2400 feet
- **Slope:** 0-100%
- **Aspect:** All
- **Major topographical features:** General topography of the FMU includes flat expanses along lower to mid slopes and along ridge tops, steep upland slopes, intermittent drainages, perennial watercourses, and seeps. The New Melones Lake and the Stanislaus River are also part of the hydrologic topography located in this FMU.

Resource Use

- Critical Watershed
- Municipal Water Supply
- Critical Deer Winter Range
- Water-related Recreation
- Developed Campgrounds
- Hunting
- Federal administrative sites
- Grazing
- Dispersed General Recreation

Hydrology & Water Quality

- The Stanislaus River is the primary hydrological river feature in this FMU.
- One large reservoir exists in this unit, New Melones Lake, which is surrounded by Reclamation land as well as adjacent to BLM and USFS lands. New Melones Lake operations provide releases for downstream fishery requirements, water quality, water rights, and also functions as a municipal water supply.

Access: This FMU is accessed by a road network of state and county roads. Access to Reclamation lands in most areas is limited, with the exception of developed recreation sites within the Project Area. Many of Reclamation's land parcels are not easily accessible by vehicle, or are limited by narrow, two track roads. Around the periphery of the New Melones Project Area, Reclamation lands are often directly adjacent to housing subdivisions and high-use rural roads, county roads, and a State Highway.

Air Quality Characteristics & Issues

- The New Melones Project Area is under the air quality management jurisdiction of the Mountain Counties Air Basin District.
- Emissions in the northern counties in the San Joaquin Valley are approximately 10 times the emissions from the 5 northern counties that comprise the Mountain Counties Air Basin District. Emissions from some southerly counties in the San Joaquin Valley contribute to some of this transport by way of the Fresno Eddy. The Fresno Eddy is a counterclockwise circulation pattern that transports morning emissions from the Fresno area northward along the eastern side of the Valley and potentially into the Mountain Counties Air Basin. Research has indicated that on some days, a significant component of the emissions that are transported from the Valley to the Mountain Counties Air basin originated in the Bay Area.
- The wind flow patterns in the project area are typically daytime, up-slope and nighttime, down-slope/down-canyon drainage winds. The air mass from the San Joaquin Valley encounters few emissions from the Mountain Counties Air Basin District before reaching the sites where the violations of the ozone standard were measured. The transport impacts identified at the higher elevations are believed to be due to transport aloft.
- During fire season, prevailing southwest, west and northwest winds tend to blow the smog generated in the valley into the Mountain Counties Air Basin District. Smoke generated from wildfires that occur in the area adds to the already stagnant air conditions. Low inversion layers reduce the air quality further by trapping the smoke closer to the ground.

Soils: Soils in this FMU include serpentine and plutonic soils, metamorphic, marine sedimentary and volcanic flow.

Cultural values: *(To be added as appropriate)*

Sensitive species & habitats, T&E species & habitat

- Special status plant species known to occur on Reclamation land in this FMU:
  - *Allium jepsonii* - Jepson's onion
  - *Allium tuolumnense* - Rawhide Hill onion
  - *Chlorogalum grandiflorum* - Red Hills soaproot
  - *Cryptantha mariposae* - Mariposa cryptantha
  - *Erythronium tuolumnense* - Tuolumne fawn lily
  - *Horkelia parryi* - Parry's horkelia
  - *Lomatium congdonii* - Stebbins' lomatium
  - *Mimulus pulchellus* - Pansy monkeyflower
- Special status animal species:
  - Bat species
  - California spotted owl
  - Northern goshawk
  - Foothill yellow-legged frog
  - California red-legged frog
  - Valley elderberry longhorn beetle
  - Vernal pool invertebrates

5. FMU Fire Occurrence & History

01 - FMU Decadal (94-03) Fire Occurrence & Ignition Cause			
Number of Fires	57	Natural	3
		Camp Fire	7
Largest Fire (Acres)	3,212	Smoking	5
		Fire Use	7
		Incendiary	6
Total Acres Burned	5,186	Powerline	2
		Equipment	11
		Vehicle	4
Average Fire Size (Acres)	91	Juveniles	1
		Unidentified	3
		Miscellaneous	8

01 - FMU Fire History Ignitions by Size Class		
Size Class (Acres)	**Number of Ignitions**	**Number of Acres**
A (0.0 - 0.2)	32	1
B (0.3 - 9.9)	16	48
C (10 - 99.9)	4	65
D (100 - 299.9)	3	610
E (300 - 999.9)	0	0
F (1000 - 4999.9)	2	4,462
G (5000+)	0	0

6. FMU Fuel Models, Fire Behavior, Fire Weather & Climate Related Impacts:

Heavy fuels and steep topography are the main influences on fire behavior in this FMU.

Fuel models and/or vegetation types within the FMU

- Fuel Model 1 – Annual grasses
- Fuel Model 2 – Herbaceous and grass vegetation under a timber overstory
- Fuel Model 4 – Heavy shrubs such as chaparral
- Fuel Model 6 – Moderate shrubs such as intermediate chamise or chaparral
- Fuel Model 9 – Closed stands of long-needle pine

Live fuel moisture characteristics: Fuel model 4 has an important live fuel moisture component that heavily influences fire behavior. This moisture content typically drops to critical levels in late spring or early summer.

General Vegetation Types: General vegetation types found in this FMU includes grasslands, oak woodlands and forests, pine and oak forests, chaparral, and deciduous shrublands. A type-specific list of primary vegetation types is listed below:

- Mixed Conifer - Pine
- Interior Live Oak
- Blue Oak
- Black Oak
- Oak / Grass savannah
- Valley Oak
- Interior Live Oak

- Poison Oak
- Chamise
- Wedge Leaf Ceanothus
- Buckeye
- Mixed Riparian Shrub
- Native Wet Perennial Grassland
- California Annual Grasslands
- Native Xeric Herbaceous shrubs
- Star thistle, medusahead and other invasive/non-native species

01 - FMU Vegetation/Fuel Types		
Vegetation/Fuel Type	**Acres**	**Percent**
Annual Grassland	179	3%
Blue Oak-Foothill Pine	5,650	85%
Chamise-Redshank Chaparral	190	3%
Montane Chaparral	570	9%
Total	**6,589**	**100%**

7. FMU Values at Risk

Primary values to be protected

- Water quality
- Watershed values
- Private property
- Developed recreation sites
- Cultural resources
- Special Status Species
- Wildlife Habitat
- Air quality
- Recreation
- Vegetation values
- Visual resources

8. FMU Communities at Risk/WUI Areas

- Angels Camp
- Stanislaus
- Tuttletown
- Jamestown
- Carson Hill
- Cloy House
- Copperopolis
- Jackass Hill

9. FMU Objectives & Strategies

Fire Management Objective Priority Statement

The fire management goal in this FMU is the protection of life and property, to gradually restore conditions approximating the Fire Regime, and to lower the potential for large, uncharacteristically severe wildfires. The management objective is to enhance fire suppression capabilities by decreasing fire behavior inside the unit and to provide a safe and effective area for possible future fire suppression activities. The primary strategies to achieve these objectives include an aggressive suppression response to all wildfires and strategically placed hazardous fuel reduction treatments.

Wildland Fire Objectives & Strategies

Wildland Fire Burned Acre Targets:

- FMU target individual wildfire size: **1 acre or less at a 90% success rate**
- FMU Target acres burned per decade: **250 acres**

Wildfire Suppression/Protection Priorities: Wildfire Suppression/Protection Priority information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Fire Suppression;* Wildfire Suppression/Protection Priorities: pg 28

Wildfire Suppression Strategies:

- Once the decadal wildfire acre burned target has been reached at **250 acres** from wildfire events, a review of the FMU objectives and strategies will be initiated to develop new suppression criteria for wildland fire events.
- Additional Wildfire Suppression Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit

(FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Fire Suppression;* Wildfire Suppression Strategies: pg 29

Wildfire Suppression Constraint Strategies: Wildfire Suppression Constraint Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Fire Suppression;* Wildfire Suppression Constraint Strategies: pg. 30

Prescribed Fire Objectives & Strategies

Prescribed Fire Acre Targets:

- Prescribed Fire Annual Acre Target: **25 acres to 100 acres**
- Prescribed Fire Decadal Acres Burned Target: **500 acres**

Prescribed Fire Objectives and Strategies: Additional Prescribed Fire Objectives and Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Fire and Non Fire Fuels Treatments:* Prescribed Fire Objectives ; Prescribed Fire Strategies: pg. 32

Non-Fire Fuels Treatment Objectives & Strategies

Non-Fire Fuels Treatment Acre Targets:

- Non-Fire annual acre target: **100 acres**
- Non-fire treatment decadal acres target: **1,000 acres**

Non-Fire Fuels Treatment Objectives & Strategies: Additional Non-Fire Fuels Treatment Objectives and Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Fire and Non Fire Fuels Treatments:* Non-Fire Fuels Treatment Objectives and Non-Fire Fuels Treatment Strategies: pg. 34

Post Fire Rehabilitation & Restoration Objectives & Strategies

Detailed information for this FMU referencing post fire stabilization and rehabilitation (including ESR and long term rehabilitation/restoration) objectives and strategies is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Post Fire Stabilization and Rehabilitation:* Post Fire Stabilization, Rehabilitation and Restoration Objectives and Strategies: pg. 36

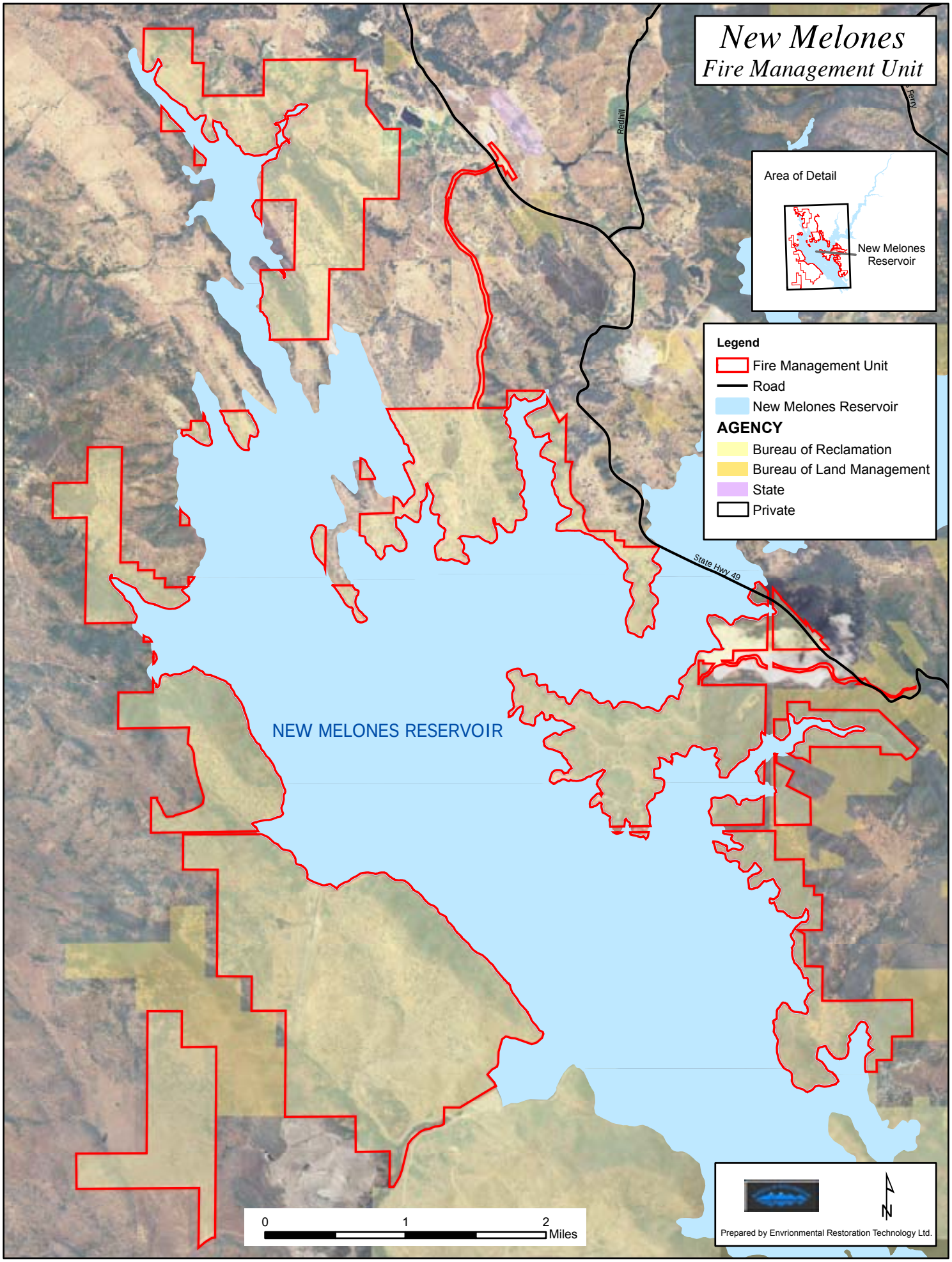
Community Protection/Community Assistance & Fire Prevention Objectives & Strategies

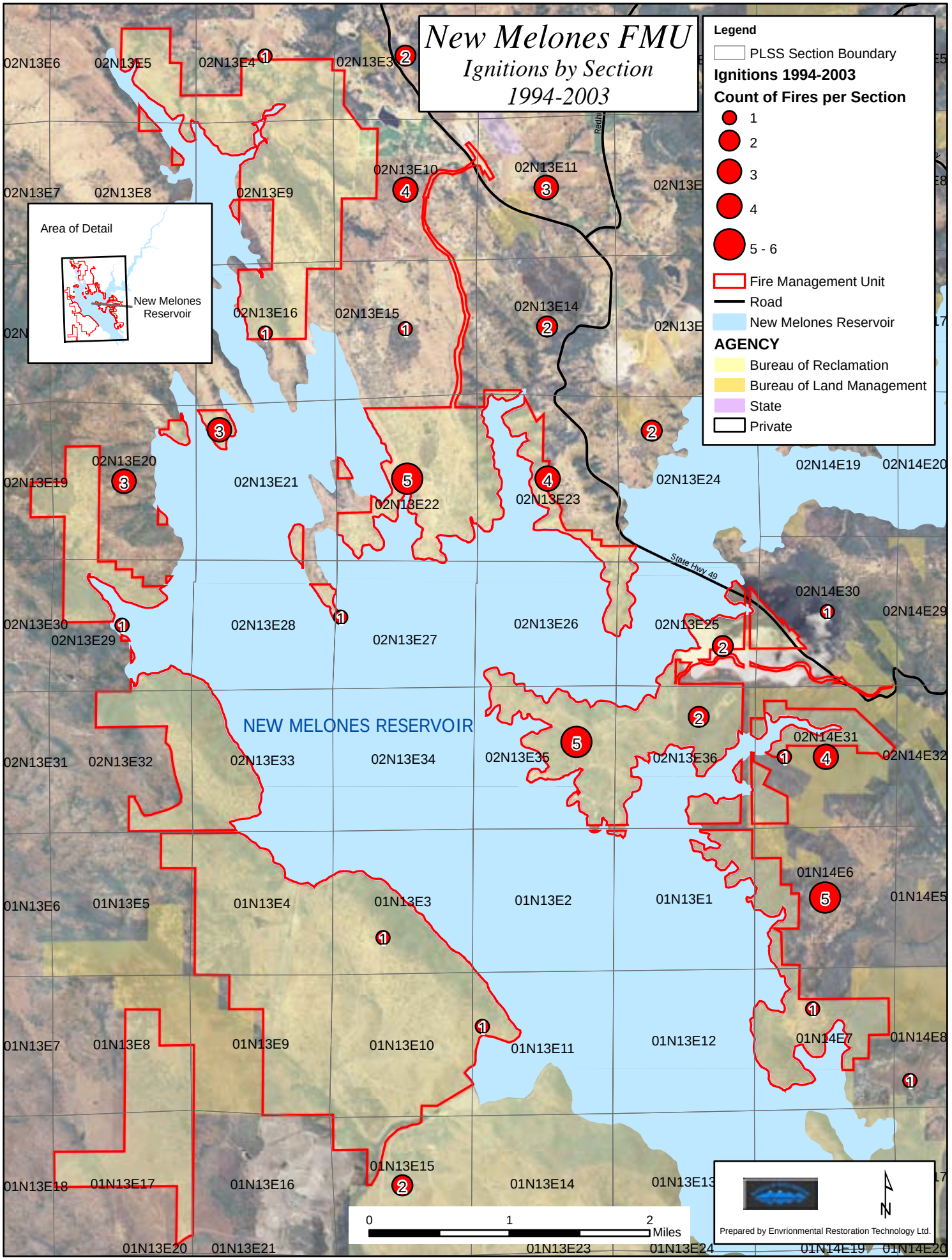
Community Protection/Community Assistance Objectives & Strategies: Community Protection/Community Assistance Objectives and Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Community Assistance, Education and Fire Prevention:* Community Protection/Community Assistance Objectives and Community Protection/ Community Assistance Strategies: pg. 35

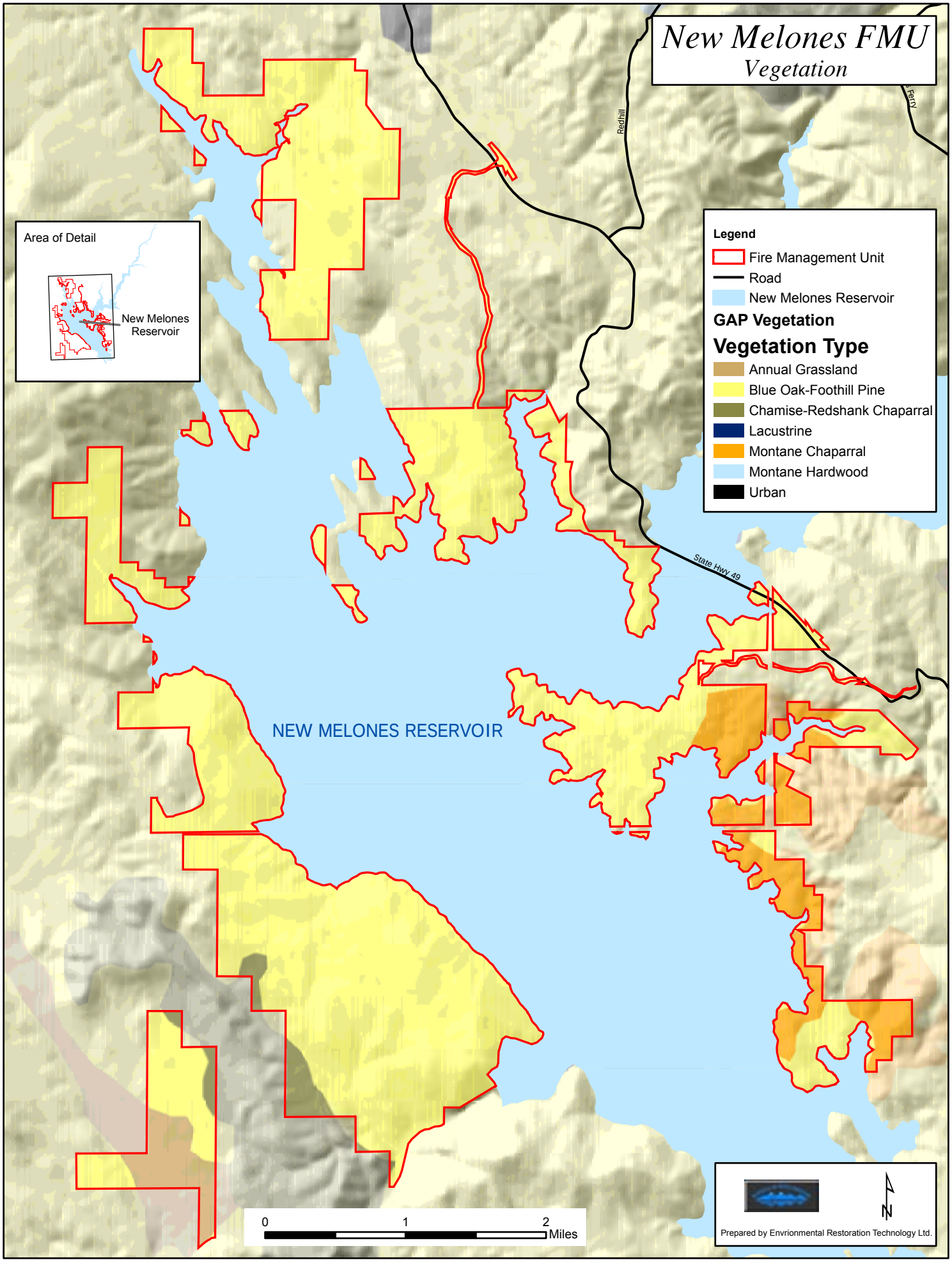
Fire Prevention Strategies: Fire Prevention Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs; Community Assistance, Education and Fire Prevention:* Fire Prevention Strategies: pg. 38

Monitoring & Environmental Analysis Objectives & Strategies

Detailed information for this FMU referencing site monitoring and NEPA documentation is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and Strategies Common to All New Melones Project Area FMUs;* Monitoring and Environmental Analysis (NEPA): pg. 38


New Melones
Fire Management Unit
Redhill
Area of Detail
New Melones Reservoir
Legend
Fire Management Unit
Road
New Melones Reservoir
AGENCY
Bureau of Reclamation
Bureau of Land Management
State
Private
State Hwy 49
NEW MELONES RESERVOIR
0
1
2
Miles
N
Prepared by Envrionmental Restoration Technology Ltd.


New Melones FMU
Ignitions by Section
1994-2003
Legend
PLSS Section Boundary
Ignitions 1994-2003
Count of Fires per Section
1
2
3
4
5 - 6
Fire Management Unit
Road
New Melones Reservoir
AGENCY
Bureau of Reclamation
Bureau of Land Management
State
Private
Area of Detail
New Melones Reservoir
NEW MELONES RESERVOIR
State Hwy 49
02N13E6
02N13E5
02N13E4
02N13E3
02N13E7
02N13E8
02N13E9
02N13E10
02N13E11
02N13E16
02N13E15
02N13E14
02N13E20
02N13E19
02N13E21
02N13E22
02N13E23
02N13E24
02N14E19
02N14E20
02N13E30
02N13E29
02N13E28
02N13E27
02N13E26
02N13E25
02N14E30
02N14E29
02N13E31
02N13E32
02N13E33
02N13E34
02N13E35
02N13E36
02N14E31
02N14E32
01N13E6
01N13E5
01N13E4
01N13E3
01N13E2
01N13E1
01N14E6
01N14E5
01N13E7
01N13E8
01N13E9
01N13E10
01N13E11
01N13E12
01N14E7
01N14E8
01N13E18
01N13E17
01N13E16
01N13E15
01N13E14
01N13E13
01N13E20
01N13E21
01N13E23
01N13E24
01N14E19
01N14E20
0
1
2
Miles
Prepared by Envrionmental Restoration Technology Ltd.


New Melones FMU
Vegetation
Area of Detail
New Melones Reservoir
Legend
Fire Management Unit
Road
New Melones Reservoir
GAP Vegetation
Vegetation Type
Annual Grassland
Blue Oak-Foothill Pine
Chamise-Redshank Chaparral
Lacustrine
Montane Chaparral
Montane Hardwood
Urban
Redhill
State Hwy 49
NEW MELONES RESERVOIR
0
1
2
Miles
N
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02 - STANISLAUS FMU