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## FMU I.D.: 02 - STANISLAUS

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

2. **FMU Location Information**

**Geographic boundaries**

- Stanislaus National Forest lands to the North
- Stewetts Point and Stanislaus National Forest lands to the East
- Highway 49, Tuttletown, and New Melones FMU to the South
- Bald Mountain and State Highway 4 to the West

3. **FMU Area Acre Total:** Bureau of Reclamation Ownership: **4,341 acres**

4. **FMU Characteristics**

**Topography**

- **Elevation Range:** 1275-2346 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 has limited access. Many of Reclamation's land parcels in this FMU are not readily accessible by vehicle. When access can be achieved it is by network of state and county roads. Those areas that are accessible are often accessible only over narrow, two track roads. Around the periphery of the New Melones Project Area, Reclamation lands are often directly adjacent to housing subdivisions, 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**

<b>02 - FMU Decadal (94-03) Fire Occurrence &amp; Ignition Cause</b>			
Number of Fires	42	Natural	3
		Camp Fire	1
Largest Fire (Acres)	14,280	Smoking	2
		Fire Use	4
		Incendiary	6
Total Acres Burned	16,144	Powerline	0
		Equipment	10
		Vehicle	0
Average Fire Size (Acres)	384	Juveniles	0
		Unidentified	0
		Miscellaneous	16

<b>02 - FMU Fire History Ignitions by Size Class</b>		
<b>Size Class (Acres)</b>	<b>Number of Ignitions</b>	<b>Number of Acres</b>
A (0.0 - 0.2)	20	1
B (0.3 - 9.9)	15	23
C (10 - 99.9)	2	40
D (100 - 299.9)	1	100
E (300 - 999.9)	3	1,700
F (1000 - 4999.9)	0	0
G (5000+)	1	14,280

## 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

<b>02 - FMU Vegetation/Fuel Types</b>		
<b>Veg/Fuel Type</b>	<b>Acres</b>	<b>Percent</b>
Blue Oak Woodland	50	1
Blue Oak-Foothill Pine	2,964	68
Chamise-Redshank Chaparral	940	22
Montane Hardwood	129	3
Montane Hardwood-Conifer	85	2
Ponderosa Pine	173	4
<b>Total</b>	<b>4,341</b>	<b>100%</b>

## 7. FMU Values at Risk

### Primary values to be protected

- Water quality
- Watershed values
- Private property
- Special Status Species
- Wildlife Habitat
- Critical Deer Winter Range
- Cultural resources
- Recreation
- Vegetation values
- Air quality

- Visual resources

## 8. FMU Communities at Risk/WUI Areas

- Forest Meadows
- Vallecitos
- Columbia
- Italian Bar
- Clark Flat
- Jackass Hill
- Skunk Ridge
- Natural Bridges
- Douglas Flat
- Murphys

## 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: **10 acres or less at a 90% success rate**
- FMU Target acres burned per decade: **1,000 acres**

***Wildfire Suppression/Protection Priorities:*** Wildland Fire 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 **1,000 acres** from wildfire events, a review of the FMU objectives and strategies will be initiated to develop new suppression criteria for wildfire 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: **50 acres to 250 acres**
- Prescribed Fire Decadal Acres Burned Target: **1,500 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: **10 acres**
- Non-fire treatment decadal acres target: **100 acres**

***Non-Fire Fuels Treatment Objectives and 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

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### **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 and 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

# Stanislaus Fire Management Unit

Murphys

### Legend

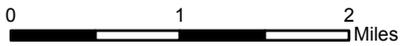
- Fire Management Unit
- Road
- New Melones Reservoir

### Agency

- Bureau of Reclamation
- Bureau of Land Management
- Local Government
- Military
- National Park Service
- Other Federal
- State
- US Fish and Wildlife
- US Forest Service
- Private

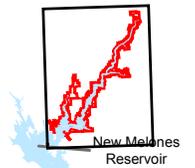
NEW MELONES RESERVOIR

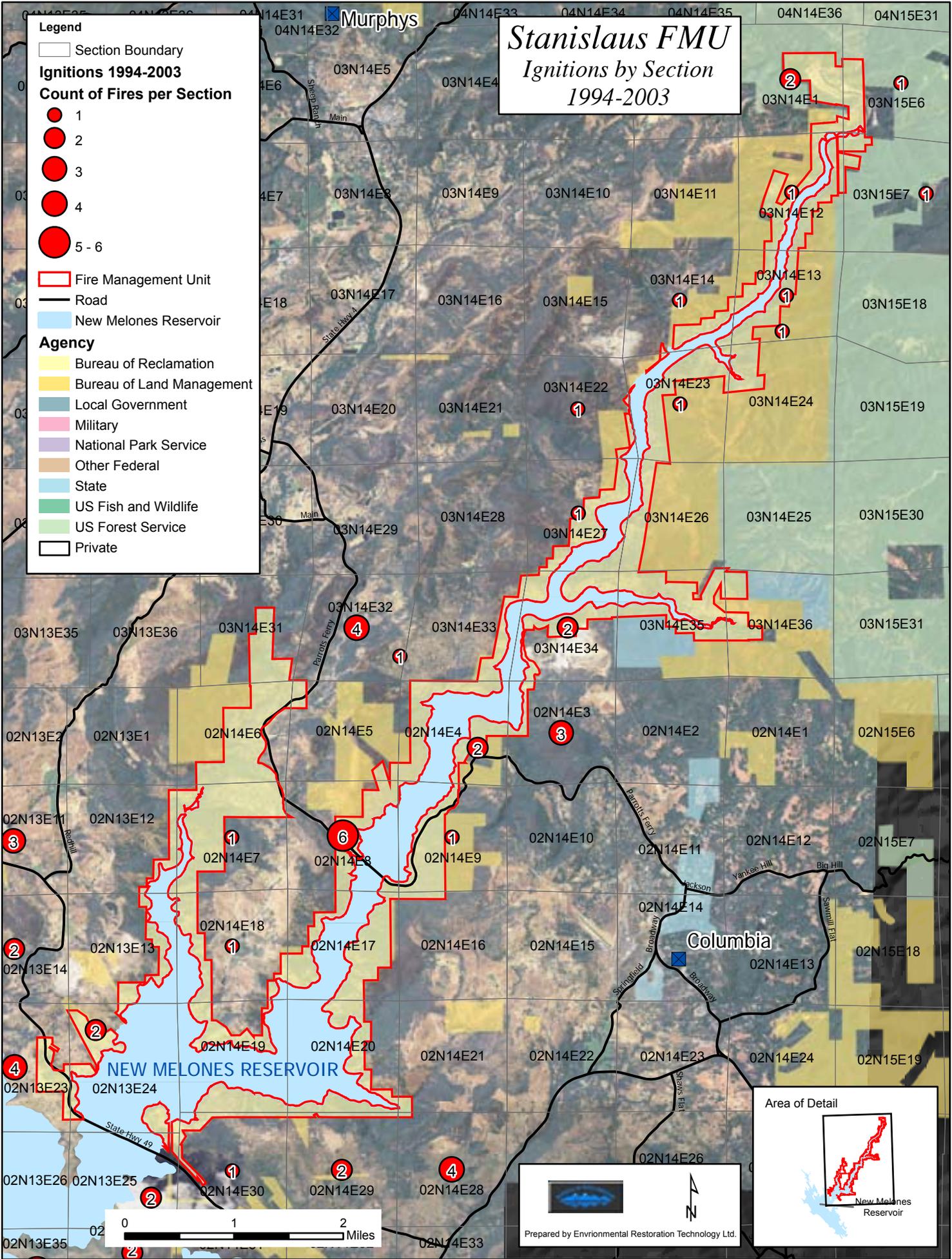
Columbia



Prepared by Environmental Restoration Technology Ltd.

### Area of Detail





**Stanislaus FMU**  
Ignitions by Section  
1994-2003

**Legend**

- 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
  - Local Government
  - Military
  - National Park Service
  - Other Federal
  - State
  - US Fish and Wildlife
  - US Forest Service
  - Private

**Area of Detail**

New Melones Reservoir

0 1 2 Miles

Prepared by Environmental Restoration Technology Ltd.

# Stanislaus FMU Vegetation

Area of Detail



NEW MELONES RESERVOIR

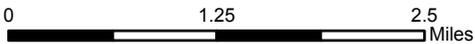
### Legend

- Fire Management Unit
- Road
- New Melones Reservoir

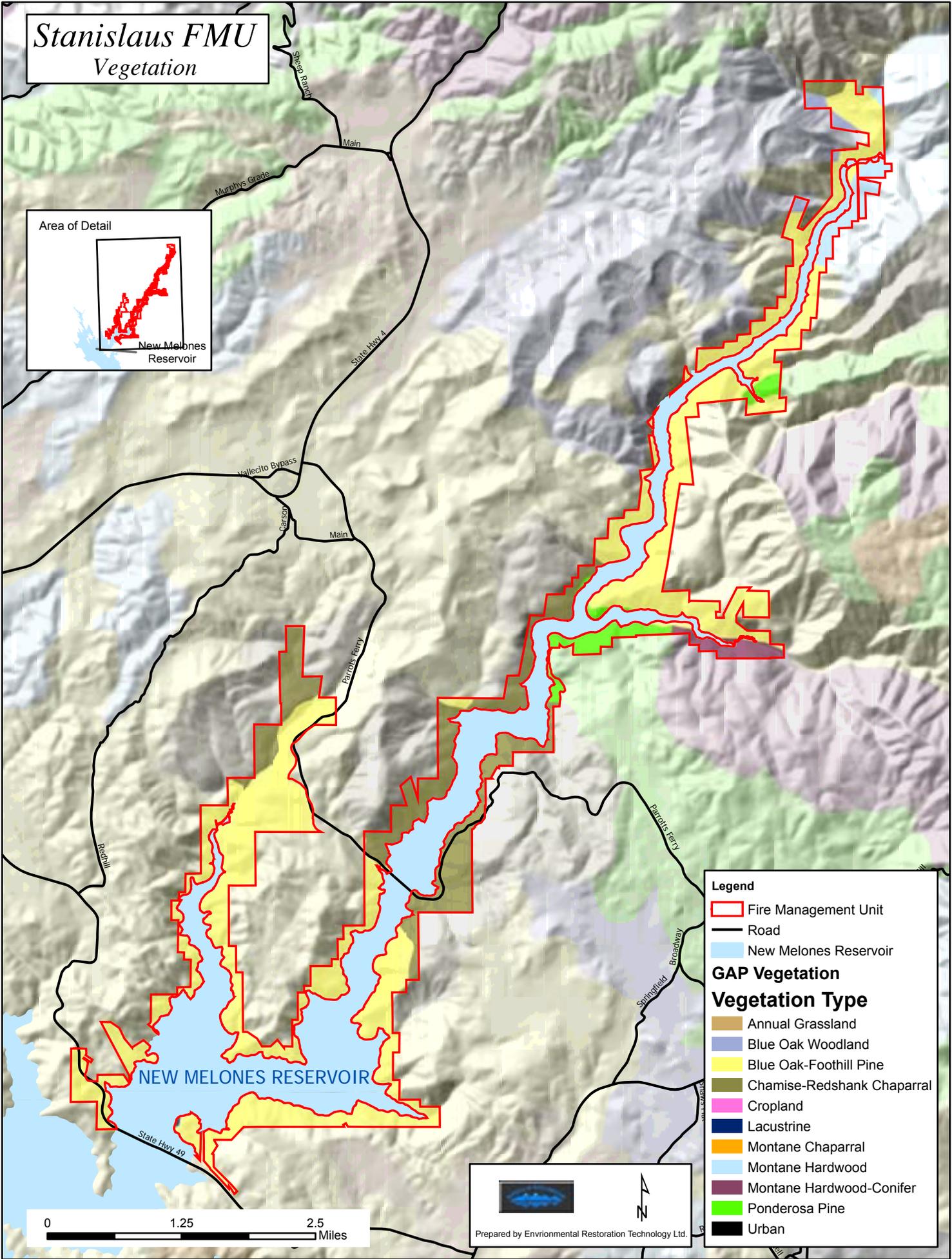
### GAP Vegetation

### Vegetation Type

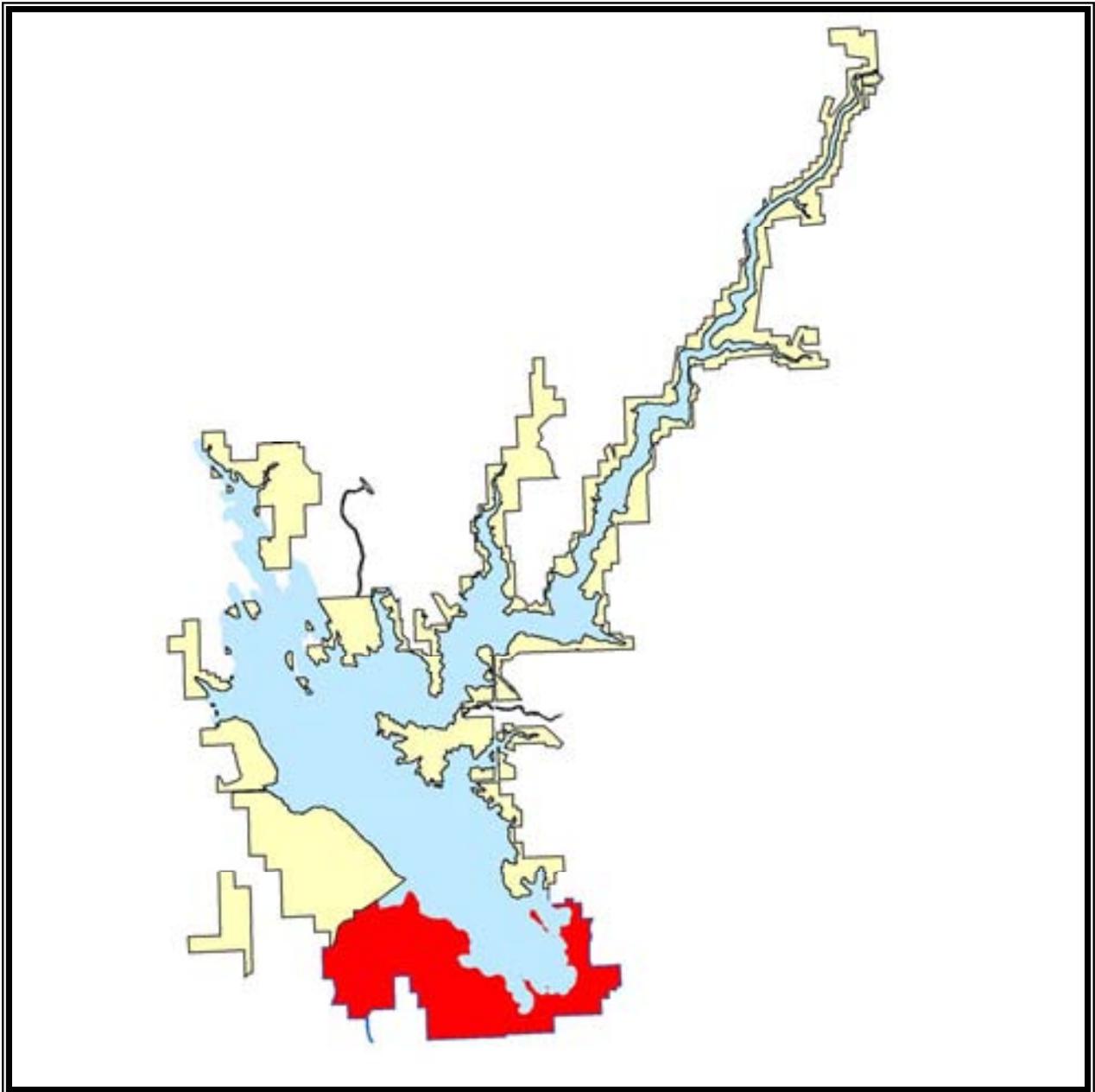
- Annual Grassland
- Blue Oak Woodland
- Blue Oak-Foothill Pine
- Chamise-Redshank Chaparral
- Cropland
- Lacustrine
- Montane Chaparral
- Montane Hardwood
- Montane Hardwood-Conifer
- Ponderosa Pine
- Urban



Prepared by Environmental Restoration Technology Ltd.



# 03 - PEORIA FMU



## **FMU I.D.: 03 - PEORIA**

**1. FMU Type:** High Value Habitat, WUI, and High Value Watershed

**2. FMU Location Information**

**Geographic boundaries**

- New Melones FMU to the North
- State Highway 108 and Table Mountain to the East
- Peoria Flat and Yosemite Junction to the South
- Stanislaus River and Obyrnes Ferry Road to the West

**3. FMU Area Acre Total:** Bureau of Reclamation Ownership: **3,788 acres**

**4. FMU Characteristics**

**Topography**

- **Elevation Range:** 260 - 1475 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. Table Mountain, a volcanic plateau, borders the FMU on the east.

**Resource Use**

- Critical Watershed
- Municipal Water Supply
- High Value Habitat
- High Value Habitat Impact Mitigation Area
- Critical Deer Winter Range
- Water-related Recreation
- Developed recreation sites
- Hunting
- Grazing
- Dispersed General Recreation

- State administrative site – CDF fire suppression facility

### **Hydrology & Water Quality**

- The Stanislaus River is the primary hydrological feature in this FMU.
- One large reservoir occurs in this unit, New Melones Lake, surrounded by Reclamation land.

**Access:** This FMU is accessed by an all-purpose dirt road, which bisects the Peoria FMU along the Peoria Mt. ridge, and connects with a County road on the east side of the Unit. Access to Reclamation and public land in the majority of this Unit is difficult, and can be controlled through a locked gate. Many of the Reclamation and public land parcels are not readily accessible by vehicle. Those that are accessible are often accessible only over narrow two track roads, requiring four- wheel drive. In other cases, Reclamation and adjacent public lands are ringed by housing subdivisions and infrastructure, and are accessible by a network of county roads and State highways.

### **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

**Special Fire Mgt. Considerations/Areas:** The *Jepson’s onion* population on Table Mountain west of Jamestown is the only known population of this Onion species south of El Dorado County. The top of the volcanic table has a scattering of homes at its edge. Vegetation on the table top is sparse due to surface rock and shallow soils.

**5. FMU Fire Occurrence & History**

<b>03 - FMU Decadal (94-03) Fire Occurrence &amp; Ignition Cause</b>			
Number of Fires	11	Natural	1
		Camp Fire	0
Largest Fire (Acres)	6	Smoking	0
		Fire Use	1
		Incendiary	0
Total Acres Burned	10	Powerline	0
		Equipment	5
		Vehicle	0
Average Fire Size (Acres)	1	Juveniles	1
		Unidentified	0
		Miscellaneous	3

<b>03 - FMU Fire History Ignitions by Size Class</b>		
<b>Size Class (Acres)</b>	<b>Number of Ignitions</b>	<b>Number of Acres</b>
A (0.0 - 0.2)	5	0
B (0.3 - 9.9)	6	10
C (10 - 99.9)	0	0
D (100 - 299.9)	0	0
E (300 - 999.9)	0	0
F (1000 - 4999.9)	0	0
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

<b>03 - FMU Vegetation/Fuel Types</b>		
<b>Vegetation/Fuel Type</b>	<b>Acres</b>	<b>Percent</b>
Annual Grassland	89	2%
Blue Oak-Foothill Pine	3,673	96%
Chamise-Redshank Chaparral	18	1%
Montane Chaparral	8	1%
<b>Total</b>	<b>3,788</b>	<b>100%</b>

## 7. FMU Values at Risk

### Primary values (resource values and private property) to be protected

- Private property
- Federal and State infrastructure (Reclamation administrative sites, developed recreational sites and a CDF fire and inmate facility)
- Water quality
- Watershed values
- Special Status Species
- Critical and high value wildlife habitat
- Cultural resources
- Vegetation values
- Air quality
- Visual resources
- High Value Habitat Impact Mitigation Area

- Critical Deer Winter Range
- Developed recreation sites/access
- Grazing

## 8. FMU Communities at Risk/WUI Areas

- Peoria Flat
- Rawhide Flat
- Copperopolis
- Scattered rural housing developments located north and east of the Peoria FMU boundary.

## 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 wildland fire size: **10 acres or less at a 90% success rate**
- FMU Target acres burned per decade: **500 acres**

***Wildfire Suppression/Protection Priorities:*** Wildland Fire 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; Wildland Fire Suppression/Protection Priorities*: pg 28

#### *Wildfire Suppression Strategies:*

- Once the decadal wildfire acre-burned target has been reached at **500 acres** from wildfire events, a review of the FMU objectives and strategies will be initiated to develop new suppression criteria for wildfire 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: **50 acres to 250 acres**
- Prescribed Fire Decadal Acres Burned Target: **1,500 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: **75 acres**
- Non-fire treatment decadal acres target: **750 acres**

***Non-Fire Fuels Treatment Objectives and 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**

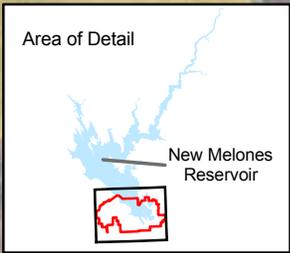
***Community Protection/Community Assistance Objectives & Strategies:*** Community Protection/Community Assistance Objectives and Strategy information for this FMU is found in; Section D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU); *Fire Management Objectives and 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 and 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

*Peoria*  
*Fire Management Unit*



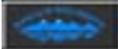
NEW MELONES RESERVOIR

**Legend**

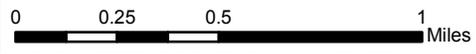
-  Fire Management Unit
-  New Melones Reservoir
-  Road

**Agency**

-  Bureau of Reclamation
-  Bureau of Land Management

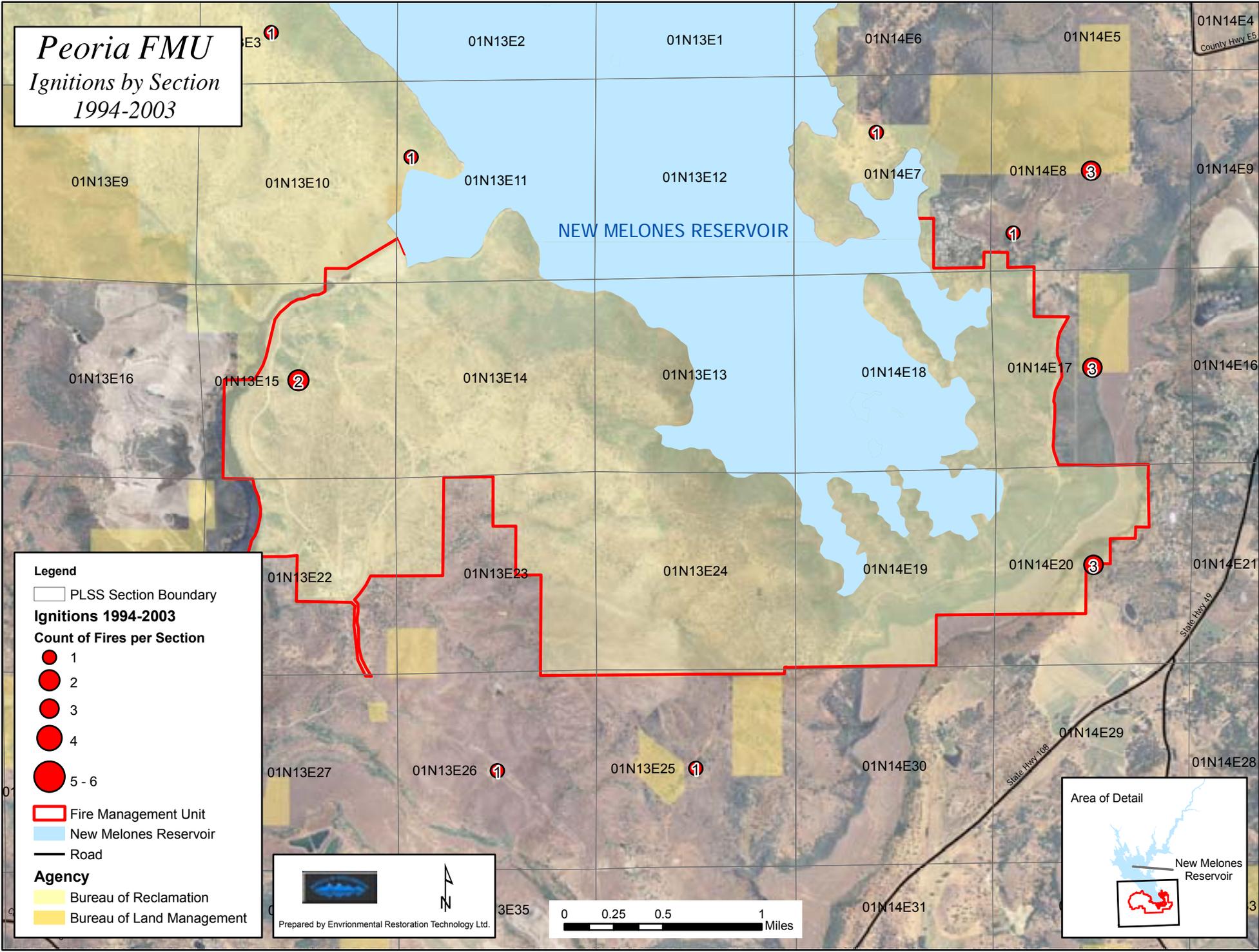


Prepared by Environmental Restoration Technology Ltd.



State Hwy 108

*Peoria FMU*  
Ignitions by Section  
1994-2003



**Legend**

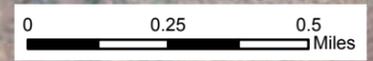
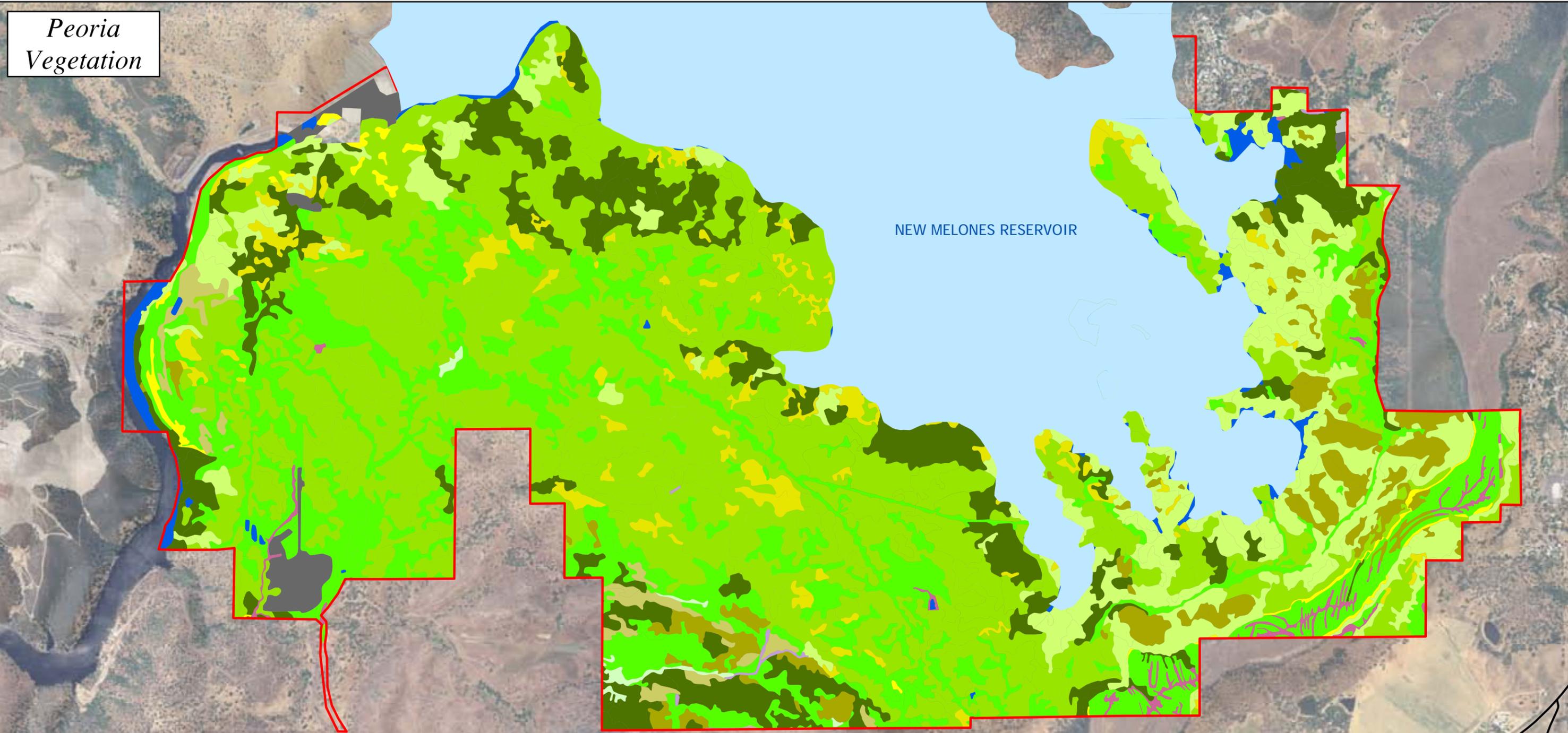
- PLSS Section Boundary
- Ignitions 1994-2003**
- Count of Fires per Section**
- 1
- 2
- 3
- 4
- 5 - 6
- Fire Management Unit
- New Melones Reservoir
- Road
- Agency**
- Bureau of Reclamation
- Bureau of Land Management

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**Area of Detail**

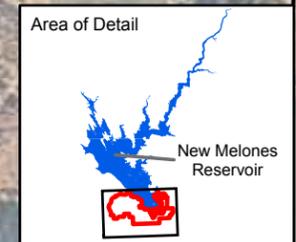
New Melones Reservoir

# Peoria Vegetation



New Melones Reservoir	3101, Deciduous Forests & Woodlands	4307, Undocumented	7110, Annual Herbaceous (Graminoid - Forbs)
Peoria Fire Management Unit	3102, Deciduous Forests & Woodlands	4308, Evergreen Shrubland	7111, Annual Herbaceous (Graminoid - Forbs)
Roads	3103, Deciduous Forests & Woodlands	4401, Microphollous Shrubland	7200, Seasonally Flooded Grasslands & Forbs
<b>PI, VEG_TYPE</b>	3105, Deciduous Forests & Woodlands	5401, Deciduous Shrubland	7202, Seasonally Flooded Grasslands & Forbs
1201, Xeromorphic Sclerophyll Woodland	3106, Deciduous Forests & Woodlands	5500, Seasonally Flooded Deciduous Shrubland	7203, Seasonally Flooded Grasslands & Forbs
1202, Xeromorphic Sclerophyll Woodland	3109, Deciduous Forests & Woodlands	5501, Seasonally Flooded Deciduous Shrubland	9001, Rock Outcrop
1203, Xeromorphic Sclerophyll Woodland	3110, Deciduous Forests & Woodlands	6101, Perennial Herbaceous (Graminoid - Forbs)	9002, Rocky Streambeds
1205, Xeromorphic Sclerophyll Woodland	4005, Evergreen Shrubland	7000, Annual Herbaceous (Graminoid - Forbs)	9100, Urban or Built Up
2101, Rounded Crown Forests & Woodlands (Pines & Cypress)	4301, Evergreen Shrubland	7100, Annual Herbaceous (Graminoid - Forbs)	9200, Agriculture
2102, Rounded Crown Forests & Woodlands (Pines & Cypress)	4302, Evergreen Shrubland	7101, Annual Herbaceous (Graminoid - Forbs)	9401, Water
2103, Rounded Crown Forests & Woodlands (Pines & Cypress)	4303, Evergreen Shrubland	7102, Annual Herbaceous (Graminoid - Forbs)	9402, Water
2104, Rounded Crown Forests & Woodlands (Pines & Cypress)	4304, Evergreen Shrubland	7103, Annual Herbaceous (Graminoid - Forbs)	9999, Unknown
2106, Rounded Crown Forests & Woodlands (Pines & Cypress)	4306, Evergreen Shrubland	7106, Annual Herbaceous (Graminoid - Forbs)	

Prepared by Environmental Restoration Technology Ltd.



## **IV. FIRE MANAGEMENT COMPONENTS**

### **A. Fire Suppression**

All suppression activities on public lands managed under Reclamation are conducted under a cooperative fire protection agreement with California Department of Forestry and Fire Protection (CDF). This protection is provided through strategically located fire stations, crew camps and air bases throughout the Fire Planning Unit area. The New Melones Project Area lies totally within the CDF Toloumne-Calaveras Ranger Unit, which provides fire protection for the Project Area. Additional federal agencies such as the US Forest Service and the Bureau of Land Management may also provide assistance as needed to CDF TCU for fires on public lands. Reclamation will provide CDF with Agency Representatives and Environmental Specialists/ Resource Advisors on Reclamation fires threatening to escape initial attack and exceed 5 acres in size.

#### **Wildfire Suppression**

Wildfire suppression objectives in this FMP are predicated on the concept that all wildfires will be subject to an aggressive initial attack. For the New Melones Project Area, the first priority in fire suppression is providing for public and firefighter safety, with secondary priorities of protecting adjacent property and natural resources. Suppression response by CDF will be determined by current fire conditions, fire location, and resource availability. Due to the amount of urban interface and the high number of communities at risk adjacent to the New Melones Project Area, aggressive initial attack will be the most common form of suppression. Fires outside wildland urban interface areas will be suppressed using strategies and objectives in accordance with the existing New Melones Draft Resource Management Plan and fire management/ fire suppression objectives identified in the FMP.

The operational role of the Reclamation in adjacent wildland/urban interface areas is largely focused on hazardous fuels reduction activities on Reclamation lands and cooperative/ interagency fire prevention and education activities within local communities. Structural fire suppression within the Project Area is the responsibility of the California Department of Forestry and other local government fire protection organizations.

#### **Prevention, Community Assistance, and Education**

Prevention is an active and integral part of the New Melones Project Area fire management program. Increasing populations and development of the wildland urban interface has created an increased threat of wildfire on private and public land. With this increased threat comes a need for a heightened level of awareness which is best achieved by public education. This public education is accomplished by cultivating local fire safe councils, participating in community events, and most importantly, personal contacts. With expected future growth in the wildland urban interface areas, fire prevention will be a key element in reducing catastrophic fire potential.

It is important to note the prevention program is a collaborative effort including local, state and federal fire agencies. This partnership allows for community risk assessments, mitigation and education activities to be conducted each year.

## **Preparedness**

Reclamation personnel will insure their capability to provide safe, cost effective fire management in support of land and resource management plans through appropriate planning, staffing, training, equipment, and oversight. Operating plans and preparedness planning will be accomplished on an annual basis.

The New Melones Resource Manager and appropriate staff will ensure employees are trained, certified and available to participate in the wildland fire program locally, regionally, and nationally as appropriate. Fire qualifications are described in the Interagency Standards for Fire and Fire Aviation Operations.

## **Fire Training**

Qualifications and Fireline refresher – Training and fitness requirements for all Reclamation New Melones personnel involved in fire suppression and support can be found in the Interagency Standards for Fire and Fire Aviation Operations Handbook. New Melones Project Area personnel will meet NWCG PMS 310-1 Manual requirements for all employees and positions and as appropriate attend annual fire refresher training and complete the appropriate level of Work Capacity Test (WCT).

## **Initial Attack**

Initial Attack is provided by CDF-TCU through a fire suppression agreement between the Bureau of Reclamation and CDF. All fires within Reclamation FMUs will be suppressed by CDF through actions and operations consistent with preplanned dispatch protocols, the annual operating plan, and in conformance with fire suppression objectives identified in this plan.

## **Extended Attack**

Extended wildfire suppression operations are a function of CDF-TCU. If a fire extends beyond the first 24 hours, the New Melones Resource Manager will prepare a Wildland Fire Situation Analysis (WFSA) which gives authority to CDF to attack the fire in a manner appropriate to the situation and following Reclamation policy and recommendations where appropriate.

## **B. Wildland Fire Use**

Wildland Fire Use is not an appropriate strategy for this area due to close proximity of houses, infrastructure, scattered ownership parcels, and high visitor use on entire landscape.

## C. Prescribed Fire

New Melones Project Area prescribed fire program is undertaken on an interagency basis treating natural fuel accumulations to meet resource management objectives, standards and guidelines as outlined in the RMP and VMP. Reasons for treatments have traditionally included wildlife habitat enhancement, site preparation for artificial and natural regeneration, range habitat improvement, and hazardous fuels reduction. Further priorities for treatments will be developed using the USDI Risk Assessment Mitigation Strategies (RAMS) assessment process.

Project level analysis through the NEPA process and other state and federal regulatory compliance processes document the purpose and need for treatment and identify the goals and objectives that the prescribed fire treatment is intended to achieve.

### Vegetative Benefits of Prescribed Burning

Prescribed burning should only be used in an ecologically appropriate season and with an appropriate interval between burns to promote the health of native plant communities.

Prescribed burning may be used to achieve the following vegetation management goals, objectives, and benefits:

- Reduce biomass accumulation
- Reduce populations of invasive exotics
- Enhance biodiversity including diversity in structure and age composition
- Rejuvenate aged chaparral and grasslands/oak woodlands affected by brush encroachment
- Enhance wildlife habitat by increasing access and diversity
- Rejuvenate chaparral for wildlife forage
- Enhance forage production

### Prescribed Fire Planning, Execution and Personnel Qualifications

Individual burn plans will be completed for all prescribed burns. Writing a burn plan is required to ensure that the necessary preparation is completed to meet the goals of the burn safely. Only qualified personnel will participate in the implementation of prescribed fire and fuels implementation projects as outlined in the NWCG 310-1. Burn projects will only occur when there are sufficient and qualified personnel on scene as specified in the burn plan.

***When implementing prescribed fire activities, Reclamation fire management and resource management personnel will:***

- Ensure that individual burn plans are prepared and approved for all prescribed burns.

- Ensure that all prescribed burning is planned and executed by persons specifically trained and experienced in fire ecology and prescribed burning and that the plan is coordinated with, or executed by, CDF-TCU.
- Secure burn notification and coordinate all prescribed burning with the Mountain Counties Air Basin District personnel, the Calaveras County Air Pollution Department at (209) 754-6504 and/or Tuolumne County Air Pollution Department at (209) 533-5693, whichever is appropriate to the county that the project will occur in.
- Provide a copy of the burn conditions report to New Melones resource specialists for later use in analyzing the fire's effects on the vegetation and re-growth.
- If appropriate, participate in the Interagency Agreement for Cooperative Use of Prescribed Fire in California. CDF has developed this prerequisite agreement to allow Federal agencies to enter into prescribed burn project agreement with CDF. This agreement is currently utilized by the BLM, Fish and Wildlife Service, National Park Service, US Forest Service, and Bureau of Indian Affairs.

### **Prescribed Fire – Five Year Program of Work**

The New Melones Project Area will develop a five-year program of work and associated budget document for prescribed fire treatments in accordance with the preferred alternative in the New Melones Resource Management Plan. The five-year program of work is developed in the USDI's Risk Assessment Mitigation Strategy (RAMS) and/or FuelsPro programs.

### **Air Quality and Smoke Management**

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 regulating air pollution sources. Emphasis is placed on air quality-related values in Class I airsheds and communities. The objective is to maintain or improve air quality to meet requirements under the Clean Air Act. Mitigating the effects of fire and fuels management on air quality include "remediating impairment of visibility in mandatory Class I federal areas which impairment results from manmade air pollution" (Clean Air Act Visibility Protection, Subpart II, 42 U.S.C. & 7491 et seq.) There are two Class I Airsheds in the FPU, which are up-canyon from New Melones. The likelihood of potential smoke impacts from Reclamation land to the National Park or Emigrant Wilderness Area is minimal, although can occur in wildfire situations.

A burning permit from the Mountain Counties Air Basin District will be obtained as necessary. In accordance with the project plan and smoke management permit, a monitoring plan will be established and reviewed for air quality conformance when required.

## **Prescribed Fire Project Coordination, Documentation and Reporting**

Coordinate with those staff and members of the public that would be potentially affected by a prescribed fire. Reclamation staff will prepare pre/post project news releases. Additional coordination will include informing all staff members and affected local and state agencies.

Coordinate prescribed burn planning with CDF-TCU. Identify special/sensitive areas, such as wetlands that can be damaged by heavy equipment impacts and any known locations of special status species.

*New Melones Project Area Office will retain the following documentation for all prescribed fire projects:*

- A copy of the NEPA documents.
- Prescribed Fire Plan including all attachments.
- Maps and photos pre/post burn.
- Applicable agreements.
- Prescribed fire report go/no go checklist, briefing checklist and test fire documentation.
- All weather forecast information including observations, field moistures, and unit logs,
- Fire report DI 1202
- Resource monitoring reports and post-incident evaluation.
- Names and locations of pertinent GIS files.

## **Pre and Post-Prescribed Burning Implementation Action Items**

- Record the pre-burn resource conditions for all areas planned to be burned with photo points and written report documenting the vegetative conditions.
- Review the FMP, VMP and the individual burn plan to validate compliance with VMP objectives. Prior to approval of the burn plan, the New Melones Resource Manager should ensure that measurable ecological benefits will result from the burn, and that resource benefits are reasonably commensurate with the potential risk of fire escape.
- Field inspect the burn site 2 to 3 months after the burn and the first spring following the burn, at a minimum. Subsequent field inspections of the burn site should be 6 months and 1 year after the burn, then annually for the next 2 years minimum, to note recovery processes and vegetative changes. If funding is available, annual monitoring should be continued indefinitely.
- Provide a written summary report of each burn site inspection. The report should document whether the actual burn was in compliance with vegetation management objectives and whether vegetation management goals were met. The report should include color photographs taken from previously established and permanently marked locations. The summary reports will serve as a reference for planning future projects.

## **D. Non-Fire Fuels Treatments**

### **Non-Fire Fuel Management Treatments– Five Year Program of Work**

Reclamation will develop a five-year program of work and associated budget document for all non-fire fuel treatments in accordance with the preferred alternative in the New Melones Resource Management Plan. The five-year program of work is developed in the USDI's Risk Assessment Mitigation Strategy (RAMS) and/or FuelsPro programs.

### **Non-Fire Fuel Treatment Implementation Activities**

The development of non-fire treatment project proposals are typically accomplished one to three years in advance of planned treatments. Field reconnaissance and interdisciplinary analysis are completed one to two years in advance of project implementation. Pre and post treatment activities include but are not limited to:

- Inventory and identify fuel treatment units
- Participate in interdisciplinary teams
- Complete required NEPA documentation and other requirements as mandated by environmental law
- Prepare project plan and layout
- Prioritize proposed projects based on current budget year allocation
- Award contracts and implement projects
- Complete required monitoring
- Report accomplishments

### **Non-Fire Treatment Equipment and Seasonal Use Restrictions:**

Non-fire treatment equipment and associated seasonal use restrictions are identified in the New Melones RMP and VMP. Specific project area restrictions will be identified in site-specific project plans. All non-fire fuel treatments will comply with the equipment and seasonal use restrictions identified and described in the New Melones VMP.

### **Effects Monitoring Requirements:**

Monitoring requirements are developed in response to resource management and project objectives from interdisciplinary input. For information on the requirements refer to the individual project plans.

## E. Emergency Stabilization and Rehabilitation

New Melones Project Area stabilization and rehabilitation program is undertaken to prevent further and unacceptable resource damage from soil erosion due to the effects of wildfire. For information see DOI Manual 620 DM 3 and Army Corps of Engineers Nationwide Permit [http://www.usace.army.mil/inet/functions/cw/cecwo/reg/nw2002dd/NW\\_37\\_20022.pdf](http://www.usace.army.mil/inet/functions/cw/cecwo/reg/nw2002dd/NW_37_20022.pdf).

The Bureau of Reclamation's Commissioner is responsible for burned area stabilization and rehabilitation activities on Reclamation lands but may obtain assistance through an approved and signed agreement or when contracted for, in whole or in part, with other agencies or tribes under the statutes cited in 620 DM 3.2.

The development and implementation of an emergency stabilization plan and its associated treatments and activities are the responsibility of the local Agency Administrator. The administrator may rely on BAER teams and qualified personnel from other bureaus or agencies to perform identified work as established in a signed agreement.

### *The emergency stabilization plan must contain:*

- A description of each treatment or activity; and
- A discussion demonstrating how the specifications are consistent and compatible with approved land use plans, and how the proposed treatments and activities are related to damage or changes caused by the wildfire; and
- An explanation of how a treatment or activity is reasonable and cost effective relative to the severity of the burn; and
- Provisions for monitoring and evaluation of treatments and activities (including criteria for measuring a successful treatment or activity) and techniques, and
- A procedure for collecting, archiving, and disseminating results; and
- Clear delineation of funding and responsibilities for implementation, operation, maintenance, monitoring, and evaluation throughout the entire life of the project, and
- Criteria for determining failure of a treatment or activity.

An Emergency Stabilization and Rehabilitation Handbook (Handbook) is available and provides operational guidance for applying emergency stabilization and rehabilitation policy. It includes a common cost-effectiveness analysis for evaluating proposed actions, a standard project accomplishment report format, and a mechanism for archiving and broadly disseminating the results of monitoring treatment effectiveness.

<http://www.fws.gov/fire/rehab/Guidance/BAERGuidebook.pdf>

New Melones Project Area ESR treatments may include, as appropriate, aerial seeding, ground seeding, construction of protective fences, and construction of soil erosion and sediment control structures. Rehabilitation will only be required where the impacts of the wildfire itself or the associated suppression actions are significant and can be mitigated. No rehabilitative action will be taken which could cause further damage to the environment. When no human life or property

is threatened, it may be preferable to use natural barriers for firelines even if more acres will be burned. Efforts to rehabilitate the direct impacts of fire suppression activities will begin as soon as possible, at times even before the fire is declared out. This will allow for the use of assigned suppression resources and potentially reduce rehabilitation costs and expedite completion. Funding for Reclamation projects will be from Reclamation funds only. Selection of projects to be funded will be determined by Reclamation management.

Project specific analysis through the NEPA process documents the purpose and need for treatment and identifies the goals and objectives that the treatment is to accomplish. Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health and safety, and to help communities protect infrastructure. Reclamation will develop program planning and budgeting information for rehabilitation treatments in accordance with the preferred alternative in the New Melones Resource Management Plan.

## **F. Communities at Risk/Community Assistance**

### **Communities at-Risk**

The current federal register shows that there are twenty communities at risk that are potentially affected by Reclamation land. They are individually listed under their respective FMU.

### **Community Assistance Programs**

The project area contains five Fire Safe Councils. These groups provide community guidance regarding fire prevention, fuel reduction, and fire education. The following are the names of the councils within the Project Area.

#### **Tuolumne/Calaveras Counties Fire Safe Councils**

- Calaveras Foothills Fire Safe Council
- Highway 108 Fire Safe Council
- Sierra Highway 4 Fire Safe Council
- Tuolumne Calaveras Ranger Unit
- Yosemite Foothills Fire Safe Council

## V. ORGANIZATION, BUDGET, AND AGREEMENTS

### A. Organization and Budget

Since New Melones Project Area employs CDF as the protecting agency, Reclamation has only a small organization with no fire suppression resources. However, the lead natural resource specialist position will execute all functions of a fire program manager, including fire and fuels project planning and implementation, fire prevention planning, wildland fire reporting and budget tracking. This position will also function as the primary Duty Officer and Agency Representative for wildfires that occur in the Project Area.

### B. Assistance Agreements and Intra/Interagency Agreements

*Policy - Fire suppression is generally handled by the agency/entity responsible for fire protection of the lands on which the fire occurs. However, undue delay in dispatching initial attack crews is not warranted simply because land ownership cannot be immediately determined.*

*The Interagency Agreement for Fire Management states “that among the Federal Wildland Fire Management Agencies, the Interagency Agreement for Fire Management provides the framework and authority for cooperative arrangements for initial attack efforts by fire suppression forces that can arrive at a fire first, regardless of agency ownership. A Federal agency performing the initial attack will notify the agency that is responsible for the land as soon as ownership is determined, and will continue suppression pursuant to the procedures outlined in the Federal National Interagency Mobilization Guide. Additional provisions for fire suppression efforts are provided for emergency or a declared major disaster through United States Code. Assistance Agreements, which includes Cooperative Agreements and Grants with state, local and non-profit entities provides for mutual or reciprocal fire protection assistance. “*

- Original copies of U.S. Code applicable to wildland fire are provided in *A Reference Guide to Principal Wildland Fire Laws for the Bureau of Reclamation*.
- Copies of the *Federal Interagency Agreement for Fire Management* are kept at Reclamation’s Western Pacific Regional Office.
- Copies of Assistance Agreements are generally kept at Reclamation’s Western Pacific Regional Office.
- Cooperative fire management agreements exist between Reclamation and the following agencies:
  - National Weather Service - Interagency Fire Management (2000), interagency agreement for Weather Service assistance during prescribed fires and regular fire season.
  - State of California: Interagency Fire Agreement between the Reclamation and State of California, CDF.

### **C. Equipment Rental Agreements**

Copies of the Interagency Emergency Equipment Rental Agreements are available from the CDF TCU Emergency Command Center and the Stanislaus National Forest Dispatch Center.

### **D. Contract Resources**

Contract resources are available from the CDF TCU Emergency Command Center, the Stanislaus National Forest Dispatch Center, and the BLM Folsom Field Office.

### **E. Contract Suppression and Prescribed Fire Resources**

There are no Contract Suppression and Prescribed Fire Resources at this time. Prescribed fire resources will be determined on site specific burn plans for projects. The use of local, state (CDF), and regional (BLM, USFS, FWS, NPS) resources will be used in prescribed fires.

## **VI. MONITORING AND EVALUATION**

### **A. Annual Program Assessment**

This FMP is a working reference for wildland fire management and hazardous fuels treatments within the New Melones Project Area. It will be reviewed annually and revised as needed to ensure that the strategic guidance provided in the plan is assisting New Melones personnel in meeting the resource management and fire/fuels management goals and objectives in the New Melones Lake RMP. Revisions, additions, and adjustments that are in conformance with the RMP may be incorporated into the FMP. Monitoring and evaluation play a central role in adaptive management and are conducted for three primary purposes:

- Ensure appropriate implementation of standards and guidelines (implementation monitoring)
- To track resource conditions and mark trends toward or away from desired conditions (status and change monitoring)
- To deal with uncertainties regarding the effectiveness and effects of land management activities (cause and effect monitoring)

Any major changes may require amending the RMP. The review will also ensure that the fire/fuels program is being implemented in a safe, cost effective manner and as directed in this fire management plan. As national wildland fire performance measures are issued, monitoring and evaluation protocols will be developed to meet those requirements and follow Department and Bureau guidelines.

### **B. Project Monitoring**

It is important that baseline inventory efforts at the New Melones Project Area level take place prior to any vegetation treatments associated with prescribed fire and non-fire fuels treatments. Effectiveness monitoring following treatment, assesses whether objectives have been met, and allows comparison of pre-treatment and post-treatment conditions. Objectives of prescribed fires and other treatments are substantially compromised if the effects of these management actions are ecologically undesirable. A comprehensive monitoring program may entail photo points and some form of vegetation sampling prior to implementation of fuels or vegetation treatments. Monitoring of weather, fire behavior, and fuel consumption should also take place during implementation of prescribed fire. After all treatments, effectiveness monitoring should continue for a minimum of two years.

Monitoring will ensure the treatments/actions meet the purpose and need for the project. Monitoring reports will be prepared and filed with the project specific plan.

**The following are activity specific monitoring strategies:**

***Prescribed Fire*** - Prescribed burn bosses are required to evaluate prescribed burns each day upon completion of burning to assess results and effectiveness of the burn as implemented. These evaluations are maintained as part of the project file. Long term effectiveness monitoring may be accomplished by the Resource staff in New Melones Project Area by analysis of study transects established prior to treatment. These transects are subsequently studied every year for the first five years then every other year after that. This data is stored in electronic format.

***Non-fire Fuels Treatments*** - All field units with fuels treatment programs are required to establish monitoring programs. The objective of the program is to determine if treatments are meeting the objectives as outlines in the NEPA analysis and project plans. The overall scope of the monitoring program is left to the New Melones Project Area staff. All objectives and constraints presented in NEPA documents and carried forward to project plans should be monitored. Monitoring responsibilities should be tied to the function that established the objective. All projects do not need complete programs. Numerous projects with similar objectives in similar vegetation types may be grouped under a single monitoring program. It is recognized that the volume of monitoring needs to remain within the available staff time and financial constraints.

Monitoring is also the consistent collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting management objectives. Fuel treatment monitoring can be defined as a systematic process for collecting and recording information to provide a basis for evaluating and adjusting resource and treatment objectives, methods and implementation practices.

The minimum monitoring requirements established for individual prescribed fire projects include weather during the fire, observed fire behavior, and whether fire treatment objectives have been met. If slowly changing moisture values, such as live fuel, 1,000 hour fuel moisture, or soil moisture, are included in the prescription, actual values should also be documented. Additional monitoring will be needed to determine if the specific resource and fire treatment objectives have been met.

Monitoring is required whenever formal Section 7 consultation occurs during the project planning phase. The presence of Threatened or Endangered species during environmental analysis triggers a heightened scrutiny from regulatory agencies, such as National Marine Fisheries Service and/or U.S. Fish and Wildlife Service. Generally, a Biological Opinion (BO) is issued which will have some effect on project implementation. It is critical then to evaluate whether Reclamation projects comply with the BO, and if the standards spelled out in the BO are consistent with protecting the species at risk and attaining project objectives.

***Emergency Stabilization and Rehabilitation*** - Reclamation's New Melones staff are responsible for monitoring effectiveness of emergency stabilization (ES) and rehabilitation (R) treatments. New Melones staff will prepare separate Emergency Stabilization and Rehabilitation Plans for funding approval by the Regional Director or WO Emergency Stabilization Coordinator. Approved plans may contain up to three years of monitoring for treatment effectiveness. Results

of monitoring for treatment effectiveness must be reported each year for ES and R by September 30.

Both ES and R projects must be documented in National Fire Plan Operations Reporting System (NFPORS).

*Emergency Stabilization Strategies:*

- Stabilize and prevent unacceptable degradation to natural and cultural resources
- Minimize threats to life and property resulting from the effects of a fire
- Repair/replace/construct physical improvements necessary to prevent degradation of land or resources
- Actions must be taken within one year following containment of a wildfire

*Rehabilitation Strategies:*

- Specify treatments required to implement post-fire rehabilitation policies
- Repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions
- Repair minor facilities damaged by fire
- Actions must be taken within three years of containment of a wildfire

New Melones staff are responsible for monitoring both implementation of the rehabilitation and stabilization activities, monitoring for species recovery, and for noxious weeds. It is anticipated that New Melones Project Area will receive funding for implementation monitoring under emergency stabilization for one year from the control date of the fire and then for emergency rehabilitation up to three years, with the request for funding coming in every year by the end of the fiscal. Reporting is also due by the end of the fiscal for emergency rehabilitation.

Documentation requirements will be established by the resource staff will be identified by site specific fires. They include identification of projects in the National Fire Plan Operations Reporting System (NFPORS).

Short-term monitoring requirements include evaluation of treatment implementation and its initial effectiveness. Post-treatment monitoring may include vegetative transects or the establishment of permanent photo points depending on specific project objectives.

Resource Specialists with GIS Specialist support conduct long term monitoring at the FMU level.

## **C. Reporting**

### **Wildland Fire**

All future Reclamation wildland fires will be documented on the DI-1202 (DOI's Fire Report System) as appropriate.

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## Prescribed Fire/Non-fire Treatments

Accomplishments of fire and fuels hazard reduction projects will be reported in the National Fire Plan Operations and Reporting System (NFPORS). All fuels projects will meet the standards and guidelines as outlined in Chapter 18 of the “Interagency Standards for Fire and Fire Aviation Operations” (NFES 2724).

The Hazardous Fuels module of NFPORS has been selected as the national interagency standard for:

- Submitting proposed projects for funding,
- Tracking and managing the program,
- Reporting performance, measuring accomplishments and accountability.

New Melones Project Area staff will have a designated NFPORS coordinator to ensure that all data entry into NFPORS is correct, timely and compliant with national standards.

- National Fire Plan Operations and Reporting System (NFPORS) <http://www.nfpors.gov/>

## Prevention & Mitigation

Accomplishments of WUI mitigation activities will be reported in the National Fire Plan Operations and Reporting System (NFPORS).

WUI mitigation targets and accomplishments should be supported by New Melones Project Area RAMS report and relate to WUI mitigation activities such as fire safe council meetings, Firewise workshops, home assessments, etc.

The Community Assistance module of NFPORS has been selected as the national interagency standard for:

- Submitting proposed projects for funding
- Tracking and managing the program
- Reporting performance, measuring accomplishments, and accountability

## Emergency Stabilization and Rehabilitation (ES&R)

ES&R information is tracked in NFPORS. Initial submission for request is due 7 days after the containment of the fire, this is normally done via email to the state coordinator. ESR due dates for funding requests and reporting accomplishment in NFPORS are due by the end of the fiscal year for out year funding.

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## Glossary of Terms

**After Action Review** – A professional discussion of an event, focused on performance standards, that enables Agency Administrators and firefighters to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses.

**Appropriate Management Response (AMR)** –

- 1.) The Appropriate Management Response (AMR) is any specific action suitable to meet Fire Management Unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical options (from monitoring to intensive management actions). The AMR is developed by using FMU strategies and objectives identified in the Fire Management Plan.
- 2.) The response to a wildfire, based on an evaluation of risks to firefighter and public safety, the circumstances under which the fire occurs, including weather and fuel conditions, natural and cultural resource management objectives, protection priorities, and values to be protected. The evaluation must also include an analysis of the context of the specific fire within the overall local, geographic area, or the national wildfire situation.

**Condition Class** – The Condition Class concept was most recently described by Hardy et al. (2001) and Schmidt et al. (2002). These descriptions are based upon the “relative risk of losing key ecosystem components”. In certain cases, Condition Classes can be assigned when ecosystems have crossed ecological thresholds. For the purposes of Condition Class description, ecological risks are determined by contrasting current with historical conditions. Condition Classes are then described qualitatively in terms of alteration from the historical range and risks associated with those departures.

The Condition Class concept helps describe alterations in key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. These alterations may be caused by fire suppression, timber harvest, livestock grazing, exotic plant species, insects/disease, and other disturbances.

An interagency working group has completed a Condition Class Guidebook, which provides worksheets and assist field units to accurately assign Condition Classes at multiple scales. Field Units should utilize the following definitions synthesized from the Cohesive Fuels Treatment Strategy (February 2006) and Coarse-Scale Spatial Data for Wildland Fire and Fuel Management (April 2002).

Condition Class 1: Fire Regimes are within an historical range, and the risk of losing key ecosystem components is low. Vegetation attributes (species composition and structure) are intact and functioning within an historical range. Fires burning in CC1 lands pose little risk to the ecosystem and have positive effects to biodiversity, soil productivity, and hydrologic processes.

*Example of typical management: Historical Fire Regime is replicated through periodic application of prescribed fire or through fire use.*

**Condition Class 2:** Fire Regimes have been moderately altered from their historical range. The risk of losing key ecosystem components is moderate. Fire frequencies have departed from historical frequencies by one or more return intervals (either increased or decreased). This results in moderate changes to one or more of the following: fire size, intensity and severity, and landscape patterns. Vegetation attributes have been moderately altered from their historical range. Wildfires burning in CC2 lands can have moderately negative impacts to species composition, soil conditions, and hydrological processes.

*Example of typical management: Moderate levels of restoration treatments are required, such as a combination of prescribed fire with mechanical/hand treatment.*

**Condition Class 3:** Fire Regimes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, intensity, severity, and landscape patterns. Vegetation attributes have been significantly altered from their historical range. Wildfires burning in CC3 lands may eliminate desired ecosystem components, exacerbate the spread of unwanted non-native species, and result in dramatically different ecological effects compared to reference conditions.

*Example of typical management: High levels of restoration treatments, such as mechanical treatments, are required before fire can be used to restore desired ecosystem function.*

*Intensive efforts, which may include seeding, herbicide application, biomass removal, and other types of rehabilitation, are required for lands in Condition Class 3.*

**Contained/Containment** – The status of a wildfire suppression action signifying that a control line has been completed around the fire, and any associated spot fires, which can reasonably be expected to stop the fire's spread.

**Contingency Actions** – A back-up plan of action when actions described in the primary plan are no longer appropriate. Contingency actions are required to be taken when the project exceeds its intent. Actions are taken to return the project to its intended design.

**Critical Habitat** – Under the Endangered Species Act, critical habitat is defined as habitat of federally listed threatened or endangered species where those physical and biological features essential to conservation of the species are found and which may require Special management considerations or protection. This habitat may currently be occupied or determined by the Secretary of the Interior to be essential for areas outside the species' current range.

**Ecosystem** - 1) A community of living plants and animals interacting with each other and with their physical environment; a geographic area where it is meaningful to address the interrelationships with human social systems, sources of energy, and the ecological processes that shape change over time. 2) The complex of a community of organisms and its environment functioning as an ecological unit in nature.

**Ecosystem Sustainability** – A concept that promotes the use of natural resources to benefit humans while conserving and wisely managing natural ecosystems for the future.

**Emergency Stabilization** – Strategies to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources.

**Endangered Species** – Any species of animal or plant in danger of extinction throughout all or a significant portion of its range and so designated by the Secretary of Interior in accordance with the 1973 Endangered Species Act.

**Environmental Assessment (EA)** – Environmental Assessments were authorized by the NEPA of 1969. They are concise, analytical documents prepared with public participation that determine if an Environmental Impact Statement (EIS) is needed for a particular project or action. If an EA determines an EIS is not needed, the EA becomes the document allowing agency compliance with NEPA requirements.

**Environmental Impact Statement (EIS)** – A detailed public document which complies with NEPA law and regulation; an EIS describes a major Federal action which significantly affects the quality of the human environment, provides alternatives to the proposed action, and analyzes the effects of the proposed action.

**Extended Attack** – Suppression activity for a wildfire that has not been contained or controlled by initial action and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander

**Fire Frequency (Fire Return Interval)** - How often fire burns a given area; often expressed in terms of fire return intervals (e.g., fire returns to a site every 5-15 years).

**Fire Management Plan (FMP)** – A plan which identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire, prescribed fire, and wildland fire use). The plan is supplemented by operational plans, including but limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans and prevention plans. Fire Management Plan's assure that wildland fire management goals and components are coordinated.

**Fire Management Unit (FMU)** – 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. The FMU's may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives.

**Fire Planning Unit (FPU)** – A Fire Planning Unit consists of one or more Fire Management Units. Fire Planning Units are the geographic scope of the landscape defined for the fire management analysis. Fire Planning Units may relate to a single administrative unit, a sub-unit, or any combination of units and sub-units. Fire Planning Units are scalable, and may be

contiguous or non-contiguous. Fire Planning Units are not predefined by Agency administrative unit boundaries, and may relate to one or more agencies. They may be described spatially.

**Fire Regime** – Describes the patterns of fire occurrence, frequency, size, and severity - and sometimes, vegetation and fire effects as well - in a given area or ecosystem. A Fire Regime is a generalization based on fire histories at individual sites. Fire Regimes can often be described as cycles because some parts of the histories usually get repeated and the repetitions can be counted and measured, such as fire return interval.

The Fire Regime concept is used to characterize the personality of a fire in a given vegetation type -- how often it visits the landscape, the type of pattern created, and the ecological effects. The following Fire Regimes are arranged along a temporal gradient, from the most frequent to the least frequent fire return interval.

REGIME	FIRE FREQUENCY	FIRE EFFECT TO DOMINANT ABOVEGROUND VEGETATION	REPRESENTATIVE ECOSYSTEM
Fire Regime I	0-35 years	Low severity	Dry pine and oak forests, Pinyon-juniper forests
Fire Regime II	0-35 years	Stand replacement	Grasslands, many shrub communities
Fire Regime III	35-100+ years	Mixed severity	Shrublands, mixed conifer forests
Fire Regime IV	35-100+ years	Stand replacement	Certain lodgepole pine, dry Douglas-fir forests
Fire Regime V	200+ years	Stand replacement	High elevation whitebark pine, spruce-fir, and Pacific coastal forests

**Fire Regime and Condition Class (FR/CC)** – A Fire Regime is a general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning. It includes the combination of fire frequency, predictability, intensity, seasonality, and extent. Condition Class is a classification of the amount of departure from the Fire Regime.

**Fire Severity** – Denotes the scale at which vegetation and a site are altered or disrupted by fire, from low to high. It is a combination of the degree of fire effects on vegetation and on soil properties.

**Fire-Adapted Ecosystem** – An ecosystem with the ability to survive and regenerate in a fire-prone environment.

**Fireline Intensity Level (FIL)** – The rate of heat energy released during combustion per unit length of fire front. It is usually expressed in BTUs/second/foot.

**Fuel Model** – A combination of vegetation types for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

**Fuel Type** – An identifiable association of fuel elements of distinctive species, form, size, arrangement or other characteristics that will cause a predictable rate.

**Fuel Reduction** – Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

**Hazardous Fuels** – A fuel complex defined by kind, arrangement, volume, condition, and location that forms a threat of ignition or of suppression difficulty.

**Initial Action** – The actions taken by the first resources to arrive at a wildfire.

**Initial Attack** – An aggressive suppression action taken on a wildfire.

**Interdisciplinary Team** – A group of individuals with different specialized training assembled to solve a problem or perform a task. The team is assembled out of recognition that no one discipline is sufficiently broad to adequately solve the problem; through interaction, participants bring different points of view and a broader range of expertise to bear on the problem.

**Land/Resource Management Plan (L/RMP)** – A document prepared with public participation and approved by an agency administrator that provides general guidance and direction for land and resource management activities for an administrative area. The L/RMP identifies the need for fire's role in a particular area and for a specific benefit. The objectives in the L/RMP provide the basis for the development of fire management objective and the fire management program in the designated area.

**Noxious Weeds** – Any plant designated by a federal, state, or county government to be injurious to public health, agriculture, recreation, wildlife, or any public or private property. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host for serious insects or diseases, and generally non-native.

**Preparedness** – Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

**Preparedness Level** – Increments of planning and organizational readiness commensurate with increasing fire danger.

**Prescribed fire (Rx)** – Any fire ignited by management actions to meet specific objectives. A written, approved prescribed burn plan must exist and NEPA requirements must be met prior to ignition.

**Prescribed Burn Plan** – This document provides the prescribed fire burn boss information needed to implement an individual prescribed fire project.

**Prescription** – Measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses, and indicate other required actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social, or legal considerations.

**Prevention** – Activities directed at reducing the number of person-caused fires, including public education, law enforcement, dissemination of information, and the reduction of hazards.

**Project Objectives** – The specific results expected from completing a project.

**Rehabilitation** – Efforts undertaken within three years of a wildfire to repair or improve fire damaged lands unlikely to recover to a management approved conditions, or to repair or replace minor facilities damaged by fire.

**Restoration** – The continuation of rehabilitation beyond the initial three years or the repair or replacement of major facilities damaged by the fire.

**Special Status Species/Sensitive Species** – Those plant and animal species identified by USFWS as sensitive, usually in cooperation CDF&G. Sensitive species are also defined as those (a) which are under status review by the USFWS or NOAA Fisheries; or (b) whose numbers are declining so rapidly that Federal listing may become necessary; or (c) with typically small and widely dispersed populations; or (d) inhabiting ecological refugia of other Specialized or unique habitats.

**Suppression** – All the work of extinguishing or containing a fire, beginning with its discovery.

**Threatened Species** – Any species likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been designated in the Federal Register by the Secretary of Interior as such.

**Watershed** – The area of land bounded by a divide, that drains water, sediment, and dissolved materials to a common outlet at some point along a stream channel, or to a lake, reservoir, or other body of water; also called drainage basin or catchment.

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

**Wildfire Suppression** – an Appropriate Management Response to wildfire (or an escaped wildland fire use or prescribed fire) that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

**Wildland** – An area in which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities; structures, if any, are widely scattered.

**Wildland Fire** – Any non-structure fire that occurs in the wildland.

**Wildland Fire Situation Analysis (WFSA)** – A decision-making process that evaluates alternative wildfire suppression strategies against selected environmental, social, political, and economic criteria, and provides a record of those decisions.

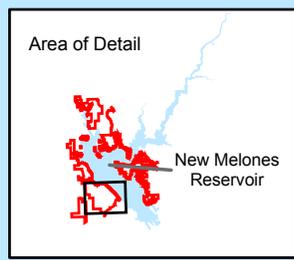
**Wildland Fire Use (WFU)** – The application of the Appropriate Management Response to naturally-ignited wildland fires to accomplish specific resource management objectives in predefined designated areas outlined in Fire Management Plans.

**Wildland Urban Interface (WUI)** – WUI is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (SAF, July 1990). It is synonymous with the term "intermix."

## **APPENDICES**

Appendix A – New Melones Fuels Management Projects

*New Melones FMU*  
*Bostick Mountain*  
*Prescribed Burns*



NEW MELONES RESERVOIR

Bostick Mountain #1 FY 2011

Bostick Mountain #2 FY 2012

**Legend**

- ▭ Prescribed Burn
- ▭ Fire Management Unit

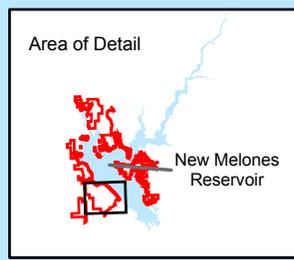
**Agency**

- ▭ Bureau of Reclamation
- ▭ Bureau of Land Management
- ▭ New Melones Reservoir

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*New Melones FMU*  
*Bostick Mountain Fuel Break*



NEW MELONES RESERVOIR

**Legend**

- Fuel Break
- Fire Management Unit

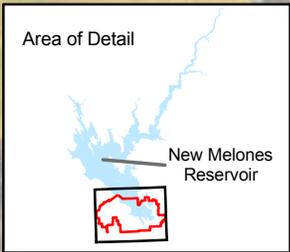
**Agency**

- Bureau of Reclamation
- Bureau of Land Management
- New Melones Reservoir

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*Peoria Mountain  
Fuel Break*



NEW MELONES RESERVOIR

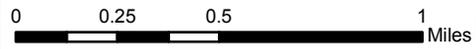
**Legend**

- Fuel Break
- Peoria Fire Management Unit
- Road
- New Melones Reservoir

**Agency**

- Bureau of Reclamation
- Bureau of Land Management

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State Hwy 108