

**Placer County Water Agency  
Middle Fork American River Project  
(FERC No. 2079)**

***FINAL***

**LAND 3 – EMERGENCY ACTION  
AND PUBLIC SAFETY  
TECHNICAL STUDY REPORT**



**Placer County Water Agency  
P.O. Box 6570  
Auburn, CA 95604**

**March 2010**

---

**TABLE OF CONTENTS**


---

	Page
1.0 Introduction.....	1
2.0 Study Objectives.....	1
3.0 Study Implementation.....	1
3.1. Study Elements Completed .....	1
3.2. Variances from the LAND 3 – TSP .....	2
3.3. Outstanding Study Elements .....	2
3.4. Proposed Modifications to the LAND 3 – TSP .....	2
4.0 Extent of Study Area.....	2
5.0 Study Approach.....	2
5.1. PCWA’s EAP .....	3
5.2. Project Emergencies not Covered under the EAP .....	3
5.3. Inter-Agency Notification and Coordination in the Event of a Non-Project Emergency.....	3
5.4. Public and Worker Safety .....	3
5.5. Emergency Incidents .....	4
5.5.1. PCWA’s Notification of Emergency Responders.....	4
5.5.2. Historical Emergency Incidents .....	4
5.5.3. Fire History.....	7
6.0 Study Results .....	7
6.1. PCWA’s Emergency Action Plan (EAP).....	7
6.1.1. PCWA’s Roles and Responsibilities.....	8
6.1.2. Notification and Coordination .....	9
6.1.3. Potential Project Facility Failures that Would Warrant Implementation of EAP .....	10
6.1.4. Additional Situations that May Would Warrant Implementation of EAP.....	11
6.1.5. EAP Updating Process.....	11
6.1.6. Integration of the National Incident Management System (NIMS) .....	11
6.1.7. EAP Inspections and Reporting .....	12
6.2. Procedures for Project Emergencies Not Covered under the EAP .....	13
6.2.1. PCWA’s Planning and Response Procedures .....	13
6.2.2. Notification and Coordination .....	13
6.3. Inter-agency Notification and Coordination in the Event of a Non-Project Emergency.....	13
6.4. Public and Worker Safety Programs.....	14

6.4.1. FERC Public and Worker Safety Requirements.....	14
6.4.2. PCWA Employee/Contractor Communication during Non-Project-Related Emergencies.....	14
6.4.3. PCWA Communication with the Public during Emergencies.....	14
6.4.4. Public Health and Safety Programs and Measures.....	14
6.4.5. Helicopter Access .....	16
6.4.6. Non-emergency Measures.....	16
6.5. Emergency Incidents .....	17
6.5.1. Historical Emergency Incidents.....	17
6.5.2. Fire History.....	17
7.0 Literature Cited.....	18

**List of Tables**

Table LAND 3-1.	Existing Project Facilities and Features.
Table LAND 3-2.	Project Recreation Facilities.
Table LAND 3-3.	Potential Project Betterments.
Table LAND 3-4.	Dispersed Concentrated Use Areas.
Table LAND 3-5.	Bypass and Peaking Reaches Associated with the Middle Fork Project.
Table LAND 3-6.	Primary Contacts for LAND 3 Interviews and Data Gathering Effort.
Table LAND 3-7.	Summary of PCWA’s Planned Response Actions During an Emergency at French Meadows Dam, Hell Hole Dam, and Ralston Afterbay Dam.
Table LAND 3-8.	Public Safety Signs Associated with the MFP.
Table LAND 3-9.	Buoy and Log Booms Associated with the MFP.
Table LAND 3-10.	Summary of Flow-related Emergency Incidents in the Vicinity of the MFP.
Table LAND 3-11.	Summary of Emergency Incident Responses to MFP Facilities by Location and Incident Type.
Table LAND 3-12.	Summary of Emergency Incident Responses in the Vicinity of the MFP by Location and Incident Type.
Table LAND 3-13.	Summary of Emergency Incident Responses in the Vicinity of the Peaking Reach.

**List of Figures**

Figure LAND 3-1. LAND 3 – Emergency Action Plan and Public Safety Study Objectives and Related Study Elements and Reports.

**List of Maps**

Map LAND 3-1. Existing Helicopter Landing Sites in the Vicinity of the MFP.

Map LAND 3-2. Fire History in the Middle Fork American River Watershed.

**List of Appendices**

Appendix A. Emergency Action Plan Annual Training Invitation to Responsible Agencies and Organizations (2009).

Appendix B. Types of Safety Signs in the Vicinity of the MFP.

Appendix C. Photographs of Public Safety Signs at Project Facilities, Developed Project Recreation Facilities, Dispersed Concentrated Use Areas, and the Bypass and Peaking Reaches.

Appendix D. Photographs of Buoys and Log Booms Associated with the MFP.

Appendix E. Emergency Incident Response Summary Tables.

## **1.0 INTRODUCTION**

This report describes the emergency response and public safety study conducted by the Placer County Water Agency (PCWA) in accordance with the LAND 3 – Emergency Action and Public Safety Technical Study Plan (LAND 3 – TSP). The LAND 3 – TSP was included in Supporting Document (SD) H of the Pre-Application Document (PAD) for the Middle Fork American River Project (MFP or Project) (PCWA 2007). Specifically, this report provides a detailed description of the objectives, summary of study implementation, study area, approach (methods), results, and literature cited associated with completion of the emergency response and public safety study in 2008/2009.

## **2.0 STUDY OBJECTIVES**

The objectives of the emergency action and public safety study described in the LAND 3 – TSP are as follows:

- Describe PCWA's Emergency Action Plan (EAP), including emergency action procedures that are followed in the event of an actual or potential Project facility failure.
- Describe PCWA's planning efforts and response activities related to emergency situations not covered under the EAP.
- Describe how PCWA communicates and coordinates with State, federal, and local agencies during emergency events in the vicinity of the MFP.
- Describe PCWA's public and worker safety measures.
- Describe PCWA's planning efforts and response activities related to incidents or emergencies involving the public, employees, or contractors.
- Characterize the number, type, and location of incidents and associated emergency response efforts that have occurred in the vicinity of the MFP.

The objectives of the emergency action and public safety study and the related study elements and reporting are summarized in Figure LAND 3-1.

## **3.0 STUDY IMPLEMENTATION**

The emergency action and public safety study was initiated in 2008 and completed in 2009. Study elements that have been completed, variances from the LAND 3 – TSP, outstanding study elements, and proposed modifications to the LAND 3 – TSP are discussed below.

### **3.1. STUDY ELEMENTS COMPLETED**

The following study elements have been completed:

- Described PCWA's EAP.
- Identified and described Project-related and non-Project-related emergencies not covered in the EAP and PCWA's notification and coordination procedures with other land management and emergency response agencies.
- Identified and described FERC's regulations and requirements concerning public health and worker safety.
- Described PCWA's communication procedures with employees, contractors, and the public in the vicinity of the Project during non-Project related emergencies.
- Identified and described PCWA's existing programs and measures that protect public safety.
- Identified and mapped existing helicopter landing sites in the vicinity of the Project.
- Described how non-emergency situations are addressed in the vicinity of the Project.
- Described PCWA's notification procedures with emergency responders in the event of an accident or emergency in the vicinity of the Project.
- Characterized and documented past incidents (2006–2007) that have occurred in the vicinity of the Project.

### **3.2. VARIANCES FROM THE LAND 3 – TSP**

There were no variances from the LAND 3 – TSP.

### **3.3. OUTSTANDING STUDY ELEMENTS**

There are no outstanding study elements from the LAND 3 – TSP.

### **3.4. PROPOSED MODIFICATIONS TO THE LAND 3 – TSP**

There are no proposed modifications to the LAND 3 – TSP.

## **4.0 EXTENT OF STUDY AREA**

The study area includes the existing Project facilities identified in Table LAND 3-1, the developed Project recreation facilities identified in Table LAND 3-2, the potential Project betterments identified in Table LAND 3-3, and the dispersed concentrated use areas identified in Table LAND 3-4. In addition, the study area includes the bypass and peaking reaches identified in Table LAND 3-5.

## **5.0 STUDY APPROACH**

This section describes the approach used to complete emergency response and public safety studies associated with existing Project facilities, Project recreation facilities, potential Project betterments, and dispersed concentrated use areas. Entities that

provided information for various study elements are identified, below, and individuals interviewed are listed in Table LAND 3-6.

### **5.1. PCWA's EAP**

A review of PCWA's EAP (PCWA 2004, updated December 18, 2008) was completed to: (1) identify PCWA's role and responsibilities; (2) describe PCWA's notification and communication procedures with land management and emergency response agencies when the EAP is triggered; (3) identify potential Project facility failures or situations that would warrant implementation of the EAP; (4) describe the process for updating the EAP, including coordination efforts with Placer County Office of Emergency Services (OES) and land management agencies; (5) describe the integration of the National Incident Management System (NIMS) into the EAP or other Project-related emergency plans or procedures; and (6) describe the types of inspections required by FERC and the associated reporting requirements.

### **5.2. PROJECT EMERGENCIES NOT COVERED UNDER THE EAP**

PCWA's existing planning efforts and response procedures for emergency situations that are Project-related, but not covered by the EAP, were identified through interviews with PCWA staff and review of relevant information. Documented emergency response procedures utilized by PCWA staff for emergencies not covered by the EAP were identified through the review of PCWA's Storm Book (PCWA 2008) and PG&E's Code of Safe Practices (PG&E 2002). PCWA's notification and coordination protocols for contact with other land management and emergency response agencies during Project-related emergencies were also identified.

### **5.3. INTER-AGENCY NOTIFICATION AND COORDINATION IN THE EVENT OF A NON-PROJECT EMERGENCY**

PCWA's process for notifying emergency response agencies in the event of a non-Project-related emergency was identified through interviews with PCWA staff. The process by which federal, State, and local agencies notify PCWA in the event of an emergency in the vicinity of the Project was identified through interviews with PCWA staff and emergency response agencies.

### **5.4. PUBLIC AND WORKER SAFETY**

Public and worker safety requirements and PCWA's current programs were identified by reviewing existing documents, interviewing PCWA staff, and conducting field surveys. FERC regulations and requirements concerning public and worker safety were identified by reviewing relevant FERC documents, including FERC's Safety Signage at Hydropower Projects (FERC 2001) and Public Safety at Hydropower Projects (FERC 1992). PCWA's communication procedures for PCWA employees and contractors and the public in the event of a non-Project emergency in the vicinity of the MPF, were described through interviews with PCWA staff. PCWA's existing programs and measures aimed at protecting public health and safety, including restrictive structures, signage, and alarms were documented through field inventories and interviews with

PCWA staff. All public safety signs, buoys, and log booms located in the vicinity of Project facilities were photographed and described with regard to the condition of the safety feature (good, fair, or poor). The materials and method used to mount public safety signs at Project facilities were also described. Public safety signs at developed Project recreation facilities were assessed as part of REC 1 – Recreation Use and Facilities Assessment Technical Study Plan (REC 1 – TSP) (PCWA 2007b) and will be included in the REC 1 – TSR.

Helicopter landing sites routinely used to operate and maintain the MFP were identified through interviews with PCWA and PG&E staff. PCWA's procedures for addressing non-emergency situations associated with Project operations, such as fluctuating flows, were identified through interviews with PCWA staff.

## **5.5. EMERGENCY INCIDENTS**

### **5.5.1. PCWA's Notification of Emergency Responders**

PCWA's procedures for notifying emergency responders (including the Placer County Sheriff's Department, Placer County Search and Rescue, the USDA-FS, the California Department of Forestry and Fire Protection (CAL FIRE), and local fire departments), in the event of an accident or emergency in the vicinity of the MFP were identified and summarized based on interviews with PCWA staff.

### **5.5.2. Historical Emergency Incidents**

PCWA requested 2006 and 2007 emergency incident response data from eight agencies that respond to incidents in the vicinity of the MFP, including:

- Foresthill Fire Protection District;
- USDA-FS ENF;
- USDA-FS TNF;
- Placer County Sheriff's Department;
- CAL FIRE (Grass Valley and Camino);
- Auburn City Fire Department;
- California State Parks, Auburn State Recreation Area (ASRA); and
- El Dorado County Sheriff's Department.

PCWA requested the following types of data: incident number (if assigned), date and time of each incident, incident type, location, and responding agency. For incidents to which California State Parks responded, PCWA requested data for only those incidents that occurred within ASRA and were associated with stream-based recreation. PCWA corresponded with representatives from the agencies and departments, including meetings, to describe and clarify the data request and clarify the data that were received. The types of data received from the various agencies and departments, in

particular the extent of the area for which data was provided, were different. The data provided by these agencies reflect initial responses by a primary agency to 'normal' incidents that occurred in 2006 and 2007, and typically do not reflect mutual aid responses. The data do not reflect responses to large scale incidents such as wildfires (e.g., Ralston Ridge Fire), routine patrol activities, or incidents encountered during routine patrols. Descriptions of the data sets received from each agency and department are summarized below.

PCWA received emergency incident response data from the following agencies and departments.

- **Foresthill Fire Protection District.** Emergency response data were received for 2006 and 2007. The data set included responses to incidents that occurred in Foresthill and the greater Foresthill area including Todd Valley, Baker Ranch, Michigan Bluff, and Sugar Pine. The majority of the responses were to emergencies at residences or traffic accidents located in residential areas in or near Foresthill and the surrounding Foresthill area. The types of data provided included the incident number, date, time, address, and incident type.
- **USDA-FS Eldorado and Tahoe National Forests.** Emergency response data were received for 2006 and 2007. The data sets from both agencies included responses to incidents that occurred within the Eldorado or Tahoe National forests located at a Project facility or on roads or trails within the general area surrounding the MFP. The types of data provided by the ENF included the incident number, date and time, location description, latitude/ longitude for incident, and incident type. The TNF data types included the incident number, date, location description, and incident type.
- **Placer County Sheriff's Department.** Emergency response data were received for 2006 and 2007. The data set included responses to incidents that occurred in service areas that are in Placer County within or near the Middle Fork and North Fork American river watersheds. The service areas for which data were provided (268, 269, 273, 283, 289, 293, 294, 296, 298, and 299) are identified with a red box on Map E-1, provided in Appendix E. The majority of the responses were to emergencies at residences or traffic accidents located in residential areas. The types of data provided included the incident number, date, time, address, and incident type.
- **Grass Valley CAL FIRE.** Data were provided for 2006, 2007, and 2008. The data set included incidents that occurred in the general vicinity of the Middle Fork or North Fork American rivers on non-Forest Service lands. The majority of the responses were to emergencies at residences or traffic accidents located in residential areas in or adjacent to the Middle Fork and North Fork American rivers watersheds. The types of data provided included incident date, time, incident type, address or general area, latitude/ longitude of 'response area' (approximately a 3-mile area within which the incident occurred), and the responding agency. The CAL FIRE data set included responses by other local fire departments that responded to incidents in the vicinity of the MFP, including

Auburn City Fire, Foresthill Fire Protection District, Placer County Fire, and Roseville Fire. The data were analyzed separately for each of these responding agencies.

- **Camino CAL FIRE.** Data were provided for 2006 and 2007. The data set included incidents that occurred in the general vicinity of the Middle Fork American, North Fork American, and Rubicon rivers. The majority of the responses were to emergencies at residences or in residential areas in or adjacent to these rivers. The types of data included the incident date, time, incident number, and address or general location. A subset of the data was identical to the dataset provided by the USDA-FS Eldorado National Forest (see above). These data were included in the data summaries for the USDA-FS Eldorado National Forest and were not included in the Camino CAL FIRE data summaries.
- **California State Parks.** Data on responses to emergency incidents in ASRA were received for 2006 and 2007. The data set included incidents that occurred on and in the vicinity of the peaking reach. The types of data provided included the incident number, date, location description, and incident type. In the data provided, California State Parks did not list all emergency incidents to which they responded, as State Rangers patrol some areas with limited radio reception, and incidents that occur in these area are not always reported to the primary dispatch staff.
- **El Dorado County Sheriff's Department.** Data were provided for 2006 and 2007. The data set included responses to incidents that occurred on roads that lead into the vicinity of the MFP. All the responses were to emergencies at residences or traffic accidents located in residential areas. One call was associated with the establishment of a staging area for possible evacuations from the Ralston Ridge Fire (9/7/2006). The types of data provided included the incident number, date, time, address, and incident type.

### Data Analyses

Each data set was reviewed and analyzed. All the agencies provided data from 2006 and 2007. Duplicate entries were removed. If more than one agency responded to the same incident (including a referral to or from another agency or a multi-agency/department response to the location of the emergency), then the incident was included in the analysis for each agency. The data from each agency and department were then grouped into general location categories.

Incidents that occurred at a Project facility (Tables LAND 3-1 through LAND 3-4) or within the vicinity of the Project were then identified. An incident was considered to be 'in the vicinity of the Project' if it occurred on a road or trail leading to a Project reservoir or diversion pool or within 1.5 mile of a recreation facility. If latitude and longitudinal information was provided, then the location was mapped in GIS and reviewed.

Incidents on or immediately adjacent to the Middle Fork or North Fork American rivers in the peaking reach were also identified. These included responses to incidents at locations in the immediate vicinity of the North Fork American River, including at the Highway 49 bridge; and roads and trails that lead to the North Fork or Middle Fork American rivers. Incidents that occurred in the vicinity of the peaking reach were analyzed separately from incidents at or in the immediate vicinity of the Project. If latitude and longitudinal information was provided, then the location was reviewed in relation to the ASRA boundary in GIS.

The data from each agency and department were analyzed and summarized in tabular format, including:

- The total number, locations, and type of incidents that occurred at a Project facility;
- The total number, locations, and type of incidents that occurred within the vicinity of the Project; and
- The total number, locations, and type of incidents that occurred on or in the immediate vicinity of the peaking reach.

### **5.5.3. Fire History**

Data regarding fires that occurred in the vicinity of the MFP between 1916 and 2008 were obtained from USDA-FS Region 5, including both the ENF and TNF. The data set also included fires between 1950 and 2007 that were greater than or equal to 300 acres to which CAL FIRE responded in the vicinity of the peaking reach. The areas burned by fires during each decade were mapped in GIS.

## **6.0 STUDY RESULTS**

### **6.1. PCWA'S EMERGENCY ACTION PLAN (EAP)**

PCWA developed and maintains an EAP for the MFP (PCWA 2004, updated December 18, 2008) in compliance with FERC regulations. The primary purposes of the EAP are to: (1) provide early warning to downstream recreational users, dam operators, and other persons in the vicinity of the Middle Fork American River Canyon and Folsom Reservoir who might be affected by an imminent or actual sudden release of water from Hell Hole, French Meadows, or Ralston Afterbay dams; and (2) minimize property and environmental damage in these areas. North and South Fork Long Canyon diversion pools and dams (<1 ac-ft storage) and Middle Fork Interbay and Dam (173 ac-ft storage) are not addressed in the EAP as public safety and flooding risk associated with failure of these individual facilities is considered minimal. PCWA is currently developing an EAP for the Duncan Creek Diversion Pool and Dam.

The EAP specifies pre-planned actions to be followed in the event of an emergency. The plan includes provisions for: (1) maintenance, operation, and inspection of the dams and related facilities; (2) early warning of developing emergency conditions; (3)

evaluation of emergency situations and operational responses; and (4) timely notification of emergency response agencies and individuals in remote locations. The EAP discusses procedures for timely and reliable detection, evaluation, and classification of an existing or potential emergency situation. The EAP specifically addresses procedures for responding to emergencies in darkness, on weekends and holidays, and during adverse weather conditions. The EAP includes access routes to various locations in the vicinity of the MFP. The following describes in greater detail components of PCWA's EAP for the MFP.

### **6.1.1. PCWA's Roles and Responsibilities**

PCWA is responsible for training its employees in the protocols and procedures specified in the EAP, implementing measures for the detection of potential emergency situations, and taking specific actions once the EAP is implemented. Each of these responsibilities is summarized below.

#### **Training**

PCWA provides annual EAP training for its Project operators and other responsible personnel. PCWA also provides general orientation training for the maintenance crew. The objective of the annual training program is to prepare employees to act efficiently in carrying out their duties in the event of an emergency, as defined in the EAP. Employees are trained in the recognition and evaluation of and responses to emergency situations, and proper notification procedures. Operations and maintenance staff are trained to recognize potential danger signs at dams and reservoirs. To the extent feasible, PCWA also conducts annual EAP training exercises with participation from all the responsible response agencies and organizations. A copy of PCWA's invitation to responsible response agencies and organizations (EAP book holders) to participate in its EAP Training, Tabletop, and Functional Exercises in 2009 is provided in Appendix A.

#### **Detection**

The EAP specifies various surveillance and inspection measures for PCWA to follow to detect potential problems at the Project dams in a reliable and timely manner. In addition to regularly performed inspections of the three dams (daily), PCWA also maintains and operates several gaging stations that monitor water surface elevations in the rivers and reservoirs. Alarms located at the gaging stations are routed through PCWA and PG&E communications systems. The alarm systems are activated if changes in river stage or reservoir water surface elevation exceed specified rates. PCWA regularly monitors and checks all the remote sensing and transmitting equipment associated with the detection system. Any failure is immediately investigated and repaired.

#### **Actions during an Emergency Event**

PCWA operators are responsible for the activation of the EAP and the initial coordination and notification of a dam failure or possible hazardous condition at Hell Hole, French Meadows, and Ralston Afterbay dams.

PCWA is responsible for notifying the appropriate emergency management officials if flooding is anticipated, a dam failure is imminent, or a potentially hazardous situation is developing. If PCWA is not immediately available, then the EAP is activated by personnel at PG&E's Drum Spaulding Powerhouse. In the event of an emergency, PCWA personnel call '911' and notify the PCWA Power System Employees and Headquarters Management specified in the EAP, who then notify local authorities. PCWA is also responsible for the initial evacuation of any people immediately downstream of the dam. PCWA acts as the lead agency responding to an event until the Placer County Sheriff's Office or other designated emergency response agency assumes authority.

In the event of a dam failure emergency at any of the three dams, PCWA would implement various operational actions to stop all regulated inflows into the affected reservoir and increase the release of water from the reservoir to lower water levels and minimize potential effects downstream. In addition, if the situation were to occur at Hell Hole Dam, PCWA would notify the Sacramento Municipal Utility District (SMUD) to request that they increase upstream diversions from the Rubicon Reservoir and Buck Island Reservoir into Loon Lake Reservoir to minimize inflows into Hell Hole Reservoir. PCWA's specific action plan for each dam is outlined in Table LAND 3-7. In the event of an emergency, PCWA designates an employee to remain on-site to monitor the situation and communicate with local authorities on the situation until the emergency is deemed under control by the lead agency.

### **6.1.2. Notification and Coordination**

Depending on the location of the emergency situation requiring implementation of the EAP, PCWA personnel have various options for communications with PCWA Foresthill Headquarters and others. PCWA's mobile radios can be used to communicate with personnel at the PCWA's Middle Fork and Ralston powerhouses, and PG&E's Drum Spaulding Powerhouse. Internal phone lines are available at Ralston and Oxbow powerhouses and at Hell Hole Station. Public telephones are also available at Hell Hole Station and the USDA-FS Fire Station near Hell Hole Reservoir. Cell phone coverage is spotty throughout the MFP, but can also be used for communications. USDA-FS trucks have radios and may have satellite phones that can also be used for communications and coordination during emergencies. Any 911 calls from land-line phones are answered by the Placer County Sheriff's Department, and calls made from cell phones are answered by the California Highway Patrol (CHP) in Sacramento. The CHP transfers calls in the vicinity of the MFP to the Placer County Sheriff's Department.

The EAP contains nine flow charts that specify the notification process, with three each for French Meadows, Hell Hole, and Ralston Afterbay dams, depending on the severity and urgency of the situation (failure or imminent dam failure, potentially hazardous situation developing, and non-failure emergency situation). All emergency phone and radio numbers are listed on the flow charts. Response procedures for day and night are specified. When the EAP is activated and immediate response is required, emergency responders are directed to send representatives within one ½ hour to the Incident

Command Post. During daylight, PG&E's Drum Spaulding Powerhouse operator immediately request the use of the PG&E helicopter to patrol the river downstream and to warn persons in the vicinity of danger.

When the EAP is activated, PCWA provides the following information in the initial calls to the 911 Dispatch and any other agencies: (1) the EAP has been activated; (2) the priority and possible consequences of the emergency; (3) directions to the Dispatcher to locate the EAP, flow charts, and flood maps; (4) the call tree on the flow charts provided in the EAP that the Dispatcher is expected to use; and (5) alternate emergency numbers for call backs.

After the initial calls to '911', the Placer County Sheriff's Officer assumes the position of Incident Commander (IC) and prepares to function as a member of a Unified Command structure using the Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS) (Section 6.1.6. below). The Sheriff's Officer is responsible for notifying the appropriate local emergency organizations, alerting the public, and overseeing the affected areas. Once the Placer County Sheriff's Office assumes command, they are responsible for any evacuations. The default location of the Incident Command Post for managing emergency situations is the Placer County Emergency Operations Center at 2968 Richardson Blvd, Auburn, California unless an alternative site is designated by the IC.

The Placer County OES, Placer County Sheriff, PCWA, TNF, ENF, and California State Parks – ASRA established a Memorandum of Understanding (MOU) to enhance coordination and define responsibilities among the various entities in the event of a dam failure or other potentially hazardous situation (County of Placer, 2005). For dam failures, floods, or other significant incidents in the vicinity of the MFP, the MOU specifies the incident command system, command staff, technical support and cooperating agencies, and structure for the expenditure of funds and use of resources for the various entities. The operators of Folsom Dam and the U.S. Bureau of Reclamation are responsible for emergency responses to flood conditions in the American River downstream of Folsom Dam.

### **6.1.3. Potential Project Facility Failures that Would Warrant Implementation of EAP**

The EAP is implemented when failure or imminent failure of the dam structure occurs at Hell Hole, French Meadows, or Ralston Afterbay dams. A failure at one of these dams could also result in increased releases or flood releases from either or both of the U.S. Bureau of Reclamation's Folsom and Nimbus dams located downstream from the MFP, which could impact the Sacramento metropolitan area.

Failures are classified according to their severity and urgency, as follows:

- Condition A – Dam failure is imminent or has occurred and the determination has been made that the condition is not reversible.

- Condition B – A potential failure situation is developing and it is not clear whether remedial measures will stop future damage.

#### **6.1.4. Additional Situations that May Would Warrant Implementation of EAP**

The EAP identifies two categories of ‘non-failure’ emergencies that may warrant implementation of the EAP. Different agencies would be notified depending on the severity of the emergency. The occurrences that may warrant the implementation of the EAP include:

- A situation that requires emergency releases from the spill gates (e.g., if a reservoir is full in June and an unseasonably extreme thunderstorm occurs);
- Hazardous material spill, such as an oil spill; and
- Damage to or sabotage of spill gates or outlet valves.

If the “non-failure” emergency condition involves a major oil spill, then PCWA implements the Spill Prevention Control and Countermeasure (SPCC) plan developed for each powerhouse that includes additional information on emergency responses. For the EAP to be initiated in a “non-failure” emergency condition, at least two confirming sources must be present, such as surveillance and forecast data, and visual confirmation.

#### **6.1.5. EAP Updating Process**

PCWA annually reviews and updates the EAP as required by FERC. PCWA notifies FERC each year if any changes are made or if none are required. PCWA also distributes any annual revisions with specific instructions for replacing outdated sections to all participating agencies/ departments identified in the EAP, including the OES and the land management agencies.

#### **6.1.6. Integration of the National Incident Management System (NIMS)**

The EAP integrates relevant elements of both the SEMS and NIMS. The SEMS was initiated in California in 1993 and uses standardized terminology and organizational structures; provides for standards for communications; consolidates action plans; and includes appropriate command structures to improve the efficiency of responses and recovery from human caused or natural disasters. In 2003, the Secretary of Homeland Security was directed by the President to develop and administer the NIMS. SEMS is consistent with the requirements of the NIMS, but also includes additional requirements for county and regional levels of emergency management that are not addressed in NIMS.

The NIMS provides a comprehensive framework for effective and efficient emergency-related preparations, responses, and recoveries by various federal, state, local, tribal governments, and other non-governmental organizations. Specifically, the NIMS has six main components, including command and management; preparedness; resource

management; communications and information management; supporting technologies; and on-going management and maintenance. Since FY 2005 all state and local organizations requiring federal agency assistance during emergency preparations and responses must use the NIMS. Since late 2006, the NIMS is the official regulatory guidance for emergency incident and disaster preparedness, response, recovery, and mitigation in Placer County. Individuals and organization involved in incident response are trained in the principles of NIMS. Placer County continues to implement SEMS for the components that are not specified under NIMS.

The EAP uses the organizational management structure of the Incident Command System (ICS) as outlined in SEMS and is consistent with the NIMS. Specifically, the ICS provides a common organizational structure for facilities, equipment, personnel, procedures, and communications from various emergency responders to enable effective and efficient response. For emergencies under the EAP, the ICS is led by a Unified Command (UC), which coordinates local, state, and federal responders at the scene of a response.

The EAP and the MOU between various agencies and PCWA (County of Placer, 2005) specifically address relevant key elements of the NIMS including:

- Notification procedures and communications with the public;
- Coordination among emergency responders and with PCWA in response to a failure or imminent failure at one of the dams;
- Annual training for PCWA's project operators and other responsible personnel and general orientation training for the maintenance crew;
- Annual training and functional exercises of the EAP for all responsible agencies/ departments in the EAP; and
- Management organization among responding agencies and expenditure of funds and use of resources for the different entities.

#### **6.1.7. EAP Inspections and Reporting**

PCWA-trained operators visually inspect the dams for settlement, plugging of drains, sloughing, cracking, leakage, turbidity, vegetation, and rodent activity. Hell Hole and Ralston Afterbay dams are inspected daily, and French Meadows Dam is inspected at least once per week. The leakage weirs at French Meadows and Hell Hole dams are read and recorded weekly when accessible, and analyzed for adverse trends.

All dams are surveyed for settlement at designated locations every other year. The survey data is analyzed and compared to previous surveys to determine if settlement is within expected limits. Piezometers (water level monitoring wells) at Ralston Afterbay and French Meadows dams are regularly checked and analyzed. The piezometers at Ralston Afterbay record daily and are analyzed monthly. The piezometers at French Meadows Dam are checked and recorded monthly.

Engineers from FERC and the California Department of Water Resources Division of Safety of Dams (DSOD) conduct annual inspections at each dam with PCWA personnel and review data. Once every five years, PCWA's FERC-approved dam safety consultant inspects each dam, reviews recent surveys and historical data, and issues a report on the stability and condition of the dams to FERC.

## **6.2. PROCEDURES FOR PROJECT EMERGENCIES NOT COVERED UNDER THE EAP**

### **6.2.1. PCWA's Planning and Response Procedures**

For planning and responding to emergencies not covered under the EAP, PCWA follows PG&E's Code of Safe Practices (PG&E 2002) and PCWA's Storm Book (PCWA 2008). The Code of Safe Practices includes basic safety requirements and helicopter safety. It also specifies safety procedures for operating motor vehicles; working on pole handling operations, live line work projects, and electric transmission lines; and working in electric substations and hydro plants. The Storm Book outlines preparations for winter storm events and procedures for operations during these events. It also includes a master phone list, including rental equipment numbers, gasoline supplies, and other emergency related numbers.

### **6.2.2. Notification and Coordination**

PCWA personnel call '911' and notify various PCWA Power System Employees and Headquarters Management when a Project emergency, including a hazardous spill or fire at a MFP facility. PCWA personnel also notify the operators at PG&E's Drum Spaulding Powerhouse. If a phone call to '911' is not possible, then PCWA personnel radio the PCWA Power Systems Office in Foresthill, California. PCWA's office personnel then call '911'.

Information related to the emergency is then dispatched to other PCWA personnel working in the vicinity of the MFP, if appropriate. PCWA cooperates with federal and state agencies and other local emergency responders when an emergency occurs within the FERC Project boundary. PCWA's notification and coordination procedures for fires in the vicinity of the MFP are described in the LAND 2 – Fire Prevention and Response TSR – 2008 (PCWA 2009a). Additional procedures regarding PCWA's emergency response to an oil spill is included in PCWA's SPCC Plan for each powerhouse.

## **6.3. INTER-AGENCY NOTIFICATION AND COORDINATION IN THE EVENT OF A NON-PROJECT EMERGENCY**

When emergency responders (e.g., USDA-FS, CAL FIRE, or Placer County OES) receive a report of an emergency in the vicinity of the MFP from someone other than PCWA, the notified agency contacts the PCWA Power Systems Office in Foresthill, California. The PCWA dispatcher disperses information about the emergency to personnel working in the vicinity of the MFP, as appropriate. PCWA cooperates with federal and State agencies and local fire fighting departments and other emergency responders in the event of an emergency in the vicinity of the MFP.

## **6.4. PUBLIC AND WORKER SAFETY PROGRAMS**

### **6.4.1. FERC Public and Worker Safety Requirements**

FERC is authorized by Section 10(c) of the Federal Power Act to provide regulatory oversight of dam operators to create and maintain safe hydropower projects (FERC 1992). FERC provides guidelines for establishing safety devices and other measures that could be used to enhance protection of the public from specific types of hazards. The guidelines identify various types of project features and conditions that may pose a threat to the public, as well as examples of safety devices or measures that could be implemented to reduce hazards. FERC identifies five main categories of safety measures, including: (1) public education and information programs; (2) installation of visual and audible warnings in hazardous areas; (3) use of physical restraining devices; (4) use of escape devices; and (5) implementation of procedures for safer project operations.

FERC also provides specific guidelines on safety signage at hydropower plants for dam operators (FERC 2001). Information on key concepts for planning, design, construction, and maintenance of signs and examples of safety signage that would be suitable for different types of conditions and facilities are provided as guidance for hydro operators.

### **6.4.2. PCWA Employee/Contractor Communication during Non-Project-Related Emergencies**

In the event of a non-Project emergency, the PCWA dispatcher in the Foresthill Power Systems Office notifies PCWA employees and contractors of the incident. All PCWA employees carry radios to facilitate communication with the Foresthill Systems Office. PCWA personnel working in locations with telephones may also be contacted by phone during an emergency. Most contractors develop their own worker safety plans that are followed by their employees during an emergency and also have radios that can be used for communications with the PCWA dispatcher.

### **6.4.3. PCWA Communication with the Public during Emergencies**

PCWA relies on the Unified Command (UC) structure, and the substantial resource capabilities that the emergency services agencies bring to an emergency to communicate with the public during an emergency. Helicopter resources, employed under the UC (Placer County Sheriff's Office, California Highway Patrol, CAL FIRE, and possibly PG&E), are typically used notifying individuals downstream and in remote areas.

### **6.4.4. Public Health and Safety Programs and Measures**

PCWA's public safety programs and measures, including visual and audible warnings, physical restraining devices, and project operations, are described below.

## Visual and Audible Warnings

PCWA utilizes various audible and visual warning devices to warn the public of hazardous areas and potentially dangerous conditions. For example, danger and warning signs are located near facilities that may pose a danger to the public (e.g., powerhouses and switchyards) and along the rivers and streams in which water levels and velocities may fluctuate due to Project operations.

*Audible Warning Devices.* An audible warning device is located at Middle Fork Interbay, where abrupt changes in operations may result in changes to the water level or velocity. The siren sounds when the gates start to open. In addition, PCWA maintains security alarms at all powerhouses. The security alarms sound in the event of an unauthorized entry into a powerhouse.

*Visible Warning Devices* – PCWA uses various visible devices to warn the public, such as lights, signs, and buoys.

- Lights. At French Meadows Powerhouse and Middle Fork Powerhouse, red lights indicate that carbon dioxide has been discharged and the area needs to be ventilated and tested for oxygen prior to resuming activities within the area.
- Signage. PCWA and the USDA-FS maintain safety signs of various types in the vicinity of the MFP to provide Project-related information to the public and to warn the public about potentially hazardous conditions or areas. An excerpt of PCWA's 1993 Public Safety Plan (PCWA 1993), which includes the location and description of signs within the MFP previously approved by FERC is provided in Appendix B. Public safety signs inventoried during field surveys conducted in 2008 are described (including materials and condition) in Table LAND 3-8. Photographs of representative Project-related safety signs are provided in Appendix C.

Additional signs related to fluctuating flows and other potential safety issues in and adjacent to the Middle Fork American River peaking reach are located within ASRA. Specifically, warning signs installed in 2008 are located near trailheads to the Murderer's Bar area and the Louisiana Bar area.

- Buoys and Log Booms. Log booms are maintained at five locations in the vicinity of the MFP (Table LAND 3-9). PCWA maintains log booms across the spillways at French Meadows and Hell Hole reservoirs, Middle Fork Interbay, Ralston Afterbay, and Duncan Creek Diversion Pool. Buoys are located at one location at the beach adjacent to McGuire Picnic Area. Photographs of the buoys and log booms are provided in Appendix D.

## Physical Restraining Devices

PCWA uses various devices to restrict public access to hazardous areas, including:

- Fences around substations, powerhouses, dam houses, the spill gates at French Meadows, and other hazardous areas around dams and other project structures;
- Gates limiting access onto Project roads, as described in LAND 1 – Transportation System TSR – 2008 (PCWA 2009b);
- Trashracks in tunnel intake structures; and
- Guard rails on the dams.

PCWA maintains three public safety fences, including: 1) Dormitory Facility Barrier Fence, 2) Hell Hole Dam General Parking Area Barrier Fence; and 3) North Fork Long Canyon Crossing Removable Section Barrier Fence.

PCWA also uses slope fences to prevent damage and protect the public from falling rocks at various locations in the MFP, including French Meadows Powerhouse and Switchyard, Middle Fork Powerhouse and Switchyard, Middle Fork - Ralston Tunnel Butterfly Valve House, Middle Fork - Ralston Tunnel Surge Shaft and Tank, Middle Fork Interbay Dam, Ralston Powerhouse and Switchyard, and Oxbow Powerhouse and Switchyard.

### **Project Operating Procedures**

In the Middle Fork American River downstream from Ralston Afterbay (the peaking reach), flows often fluctuate both day-to-day and hour-to-hour as a result of peaking operations at the Oxbow Powerhouse. PCWA's current FERC license for the MFP requires that these operational activities do not cause rises in water level greater than three (3) feet per hour as measured at the Oxbow Powerhouse gage.

PCWA also maintains and operates several gaging stations that monitor water surface elevations in the rivers and reservoirs with alarms that transmit to the PCWA and PG&E communications systems. The alarm systems are activated if changes in river stage or reservoir water surface elevation exceed specified rates.

#### **6.4.5. Helicopter Access**

There are two helicopter landing sites located in the vicinity of the MFP. The landing sites are located near the Hell Hole Dormitories and near the Oxbow Powerhouse. These locations are shown on Map LAND 3-1. While these landing sites may be used by emergency responders during emergencies in the vicinity of the MFP, none of the sites are known to have been officially designated as landing sites by the Federal Aviation Administration or by any other authority.

#### **6.4.6. Non-emergency Measures**

PCWA addresses fluctuating flows in the peaking and bypass reaches by posting signs in public access areas. The signs warn the public about the potential for water to be discharged at any time. In addition, a siren at Middle Fork Interbay is activated if a gate begins to open. PCWA also has posted signs such as 'no trespassing', 'authorized

vehicles only', and 'no camping here,' to restrict access to potentially dangerous or hazardous facilities. Public safety signs have been listed and described in Table LAND 3-8, and representative photos have been included in Appendix C.

## **6.5. EMERGENCY INCIDENTS**

### **6.5.1. Historical Emergency Incidents**

Data on emergency incident responses that occurred in 2006 and 2007 were provided to PCWA by the emergency response agencies. These data reflect only the initial responses by a primary agency to 'normal' incidents that occurred, and typically do not reflect mutual aid responses. The data do not reflect responses to large scale incidents such as wildfires (e.g., Ralston Ridge Fire), routine patrol activities, or incidents encountered during routine patrols. Flow-related emergency incidents are summarized in Table LAND 3-10. In 2006–2007, eighty responses were to incidents that occurred at a Project facility (Table LAND 3-11). The USDA-FS ENF and TNF responded to the majority of these incidents. Most of these were responses to law enforcement-type incidents. CAL FIRE (Grass Valley and Camino), Auburn City Fire Department, and Placer County Fire, California State Parks, and the El Dorado County Sheriff's Department did not respond to any emergency incidents at a Project facility.

Forty-seven additional responses were to incidents at locations within the vicinity of the MFP (Table LAND 3-12). The Placer County Sheriff's Department, and the USDA-FS ENF and TNF responded to the majority of these incidents, which were primarily responses to law enforcement-type incidents.

A total of 879 responses were to incidents in the vicinity of the peaking reach (Table LAND 3-13). California State Parks, Placer County Fire, Camino CAL FIRE, and the Placer County Sheriff's Department responded to most of these incidents (98 percent). The majority of these were responses to medical or law enforcement-related incidents (87%), specifically at or near the Mammoth Bar Recreation Area, the Highway 49 Bridge area, or at or below the confluence area. California State Parks responded to most of these. The ENF and El Dorado Sheriff's Department did not respond to any incidents on or near the peaking reach. The TNF responded to one incident in the Horseshoe Bar area in 2007.

Additional data summaries, including any data provided for incidents that occurred in 2008, are provided by agency and department in Appendix E. All the data provided by the agencies and fire and sheriff departments and analyses files are available upon request.

### **6.5.2. Fire History**

Historical (1916–2008) large-scale fires (greater than or equal to 10 acres) that burned within the Middle Fork American River watershed are shown on Map LAND 3-2. The map shows the extent of each fire and fire name for the fires that occurred between 2000 and 2007.

## 7.0 LITERATURE CITED

County of Placer, Placer Operational Area Office of Emergency Services. 2005. Memorandum of Understanding on the Middle Fork American River Project Emergency Action Plan – the USDA-FS, Auburn State Recreation Area, Placer County Sheriff, Placer County Water Agency, and Placer County Office of Emergency Services. July 11, 2005.

Federal Energy Regulatory Commission (FERC). 2001. Safety Signage at Hydropower Projects. October 2001. Available at: [http://www.ferc.gov/industries/hydropower/safety/guidelines/signage/report/Safety\\_signage.htm](http://www.ferc.gov/industries/hydropower/safety/guidelines/signage/report/Safety_signage.htm). 42 pp.

Federal Energy Regulatory Commission (FERC). 1992. Public Safety at Hydropower Projects. March 1992. Available at: <http://www.ferc.gov/industries/hydropower/safety/guidelines/public-safety.pdf>. 28 pp.

Pacific Gas and Electric Company (PG&E). 2002. Code of Safe Practices, Safety and Health Program (Accident Prevention Rules). 2002 Edition. Published by the Safety, Health, and Claims Department, Pacific Gas and Electric Company.

Placer County Water Agency (PCWA). 1993. The Federal Energy Regulatory Commission's Reception of Revised Public Safety Plan for the Middle Fork River Project No. 2079, on February 23, 1993.

PCWA. 2004. Middle Fork American River Project: Emergency Action Plan. Updated December 18, 2008.

PCWA. 2007a. PCWA Middle Fork American River Project (FERC Project No. 2079), Pre-Application Document (PAD), Submitted to FERC on December 13, 2007.

PCWA. 2007b. REC 1 – Recreation Use and Facilities Assessment Technical Study Plan (TSP). PCWA Middle Fork American River Project (FERC Project No. 2079), PAD. SD H, Appendix A. Submitted to FERC on December 13, 2007.

PCWA. 2008. Draft for the Storm Book. Version September 26, 2008.

PCWA. 2009a. DRAFT LAND 2 – Fire Prevention and Response Technical Study Report – 2008.

PCWA. 2009b. DRAFT LAND 1 – Transportation System Technical Study Report – 2008.

**TABLES**

**Table LAND 3-1. Existing Project Facilities and Features.**

<b>Dams, Reservoirs, and Diversion Pools</b>
<b>Large Dams</b>
French Meadows Dam and Outlet Works
Hell Hole Dam and Outlet Works
<b>Medium Dams</b>
Middle Fork Interbay Dam
Ralston Afterbay Dam
<b>Small Dams</b>
Duncan Creek Diversion Dam
North Fork Long Canyon Diversion Dam
South Fork Long Canyon Diversion Dam
<b>Large Reservoirs</b>
French Meadows Reservoir
Hell Hole Reservoir
<b>Medium Reservoirs</b>
Middle Fork Interbay
Ralston Afterbay
<b>Small Diversion Pools</b>
Duncan Creek Diversion Pool
North Fork Long Canyon Diversion Pool
South Fork Long Canyon Diversion Pool
<b>Water Conveyance Systems</b>
<b>Tunnels</b>
Duncan Creek – Middle Fork Tunnel
French Meadows – Hell Hole Tunnel
Hell Hole – Middle Fork Tunnel
Middle Fork – Ralston Tunnel
Ralston – Oxbow Tunnel
<b>Diversion Pipes and Drop Inlets</b>
North Fork Long Canyon Diversion Pipe and Drop Inlet
South Fork Long Canyon Diversion Pipe and Drop Inlet
<b>Surge Shafts and Adits</b>
Brushy Canyon Adit
Hell Hole – Middle Fork Tunnel Surge Shaft and Tank
Middle Fork – Ralston Tunnel Surge Shaft and Tank
<b>Removable Sections and Portals</b>
Duncan Creek – Middle Fork Tunnel Portal
French Meadows – Hell Hole Tunnel Removable Section
Hell Hole – Middle Fork Tunnel Removable Section
Middle Fork – Ralston Tunnel Removable Section
North Fork Long Canyon Crossing Removable Section
<b>Intakes and Gatehouses</b>
Duncan Creek – Middle Fork Tunnel Intake
French Meadows – Hell Hole Tunnel Gatehouse
French Meadows – Hell Hole Tunnel Intake
Hell Hole – Middle Fork Tunnel Gatehouse
Hell Hole – Middle Fork Tunnel Intake
Middle Fork – Ralston Tunnel Intake and Gatehouse
Ralston – Oxbow Tunnel Intake

**Table LAND 3-1. Existing Project Facilities and Features (continued).**

<b>Water Conveyance Systems (continued)</b>	
<b>Penstocks and Valve Houses</b>	
French Meadows Powerhouse Penstock and Butterfly Valve House	
Middle Fork Powerhouse Penstock and Butterfly Valve House	
Ralston Powerhouse Penstock and Butterfly Valve House	
<b>Powerhouses, Switchyards, and Substations</b>	
French Meadows Powerhouse and Switchyard	
Hell Hole Powerhouse	
Middle Fork Powerhouse and Upper and Lower Switchyards	
Ralston Powerhouse and Switchyard	
Oxbow Powerhouse and Switchyard	
Hell Hole Substation	
<b>Gaging Stations and Weirs</b>	
<b>Stream Gages and Weirs</b>	
Duncan Creek Gage and Weir above Diversion Dam (USGS Gage and Weir No. 11427700)	
Duncan Creek Gage and Weir below Diversion Dam (USGS Gage and Weir No. 11427750)	
Middle Fork American River Gage and Weir below French Meadows Dam (USGS Gage and Weir No. 11427500)	
Middle Fork American River Gage at Interbay Dam (USGS Gage No. 11427770)	
Middle Fork American River Gage above Middle Fork Powerhouse (USGS Gage No. 11427760)	
Middle Fork American River Gage below Oxbow Powerhouse (USGS Gage No. 11433300)	
North Fork Long Canyon Gage and Weir at Diversion Dam (USGS Gage and Weir No. 11433085)	
South Fork Long Canyon Gage and Weir at Diversion Dam (USGS Gage and Weir No. 11433065)	
Rubicon River Gage and Weir below Hell Hole Dam (USGS Gage and Weir No. 11428800)	
<b>Diversion Gages</b>	
North Fork Long Canyon Gage at Diversion Dam (USGS Gage No. 11433080)	
South Fork Long Canyon Gage at Diversion Dam (USGS Gage No. 11433060)	
<b>Reservoir Gages</b>	
French Meadows Reservoir Gage (USGS Gage No. 11427400)	
French Meadows Reservoir Staff Gage	
Hell Hole Reservoir Gage (USGS Gage No. 11428700)	
Hell Hole Reservoir Staff Gage	
Middle Fork Interbay Reservoir Gage	
Ralston Afterbay Reservoir Gage	
<b>Powerhouse Gages</b>	
French Meadows Powerhouse Gage (USGS Gage No. 11427200)	
Middle Fork Powerhouse Gage (USGS Gage No. 11428600)	
Oxbow Powerhouse Gage (USGS Gage No. 11433212)	
Ralston Powerhouse Gage (USGS Gage No. 11427765)	
<b>Leakage Weirs</b>	
French Meadows Dam Leakage Weirs Nos. 1–6	
Hell Hole Dam Leakage Weir	
<b>Project Communication Lines and Powerlines</b>	
<b>French Meadows Area</b>	
French Meadows Dam Generator Building to French Meadows Dam Outlet Works Powerline	
French Meadows Dam Generator Building to French Meadows Dam Spillway Gates Powerline	

**Table LAND 3-1. Existing Project Facilities and Features (continued).**

<b>Project Communication Lines and Powerlines (continued)</b>
<b>Hell Hole Area</b>
French Meadows Powerhouse to French Meadows Powerhouse Penstock and Butterfly Valve House Communication Line/Powerline
French Meadows Powerhouse and Switchyard to Hell Hole – Middle Fork Tunnel Gatehouse, Dormitory Facility, Operator’s Cottages, and Hell Hole Powerhouse Communication Line/Powerline
Dormitory and Cottages Water Supply Tank Powerline
Hell Hole Powerhouse to Rubicon River Gage and Weir below Hell Hole Dam Communication Line/Powerline
<b>Middle Fork Interbay Area</b>
Middle Fork Powerhouse to Middle Fork Powerhouse Butterfly Valve House Communication Line/Powerline
Middle Fork Powerhouse Butterfly Valve House to Radio Repeater near Hell Hole – Middle Fork Tunnel Surge Tank (underground) Communication Line/Powerline
Middle Fork Powerhouse to Middle Fork – Ralston Tunnel Intake and Gatehouse Communication Line/Powerline
Middle Fork Powerhouse to Middle Fork American River Gage above Middle Fork Powerhouse Communication Line/Powerline
<b>Ralston – Oxbow Area</b>
Ralston – Oxbow Tunnel Intake to Ralston Powerhouse Communication Line
Ralston Powerhouse to Ralston Powerhouse Butterfly Valve House Communication Line/Powerline
Ralston Afterbay Dam Generator Building to Ralston – Oxbow Tunnel Intake Communication Line/Powerline
Oxbow Powerhouse to Ralston Afterbay Dam Generator Building Communication Line/Powerline
<b>Photovoltaic Poles and Powerlines</b>
Photovoltaic Poles and Powerline to Duncan Creek Gage above Diversion Dam
Photovoltaic Pole and Powerline at Duncan Creek Gage below Diversion Dam
Photovoltaic Pole and Powerline at Middle Fork American River Gage below French Meadows Dam
Photovoltaic Pole and Powerline at Middle Fork American River Gage above Middle Fork Powerhouse
Photovoltaic Pole and Powerline at North Fork Long Canyon Gage at Diversion Dam
Photovoltaic Pole and Powerline at South Fork Long Canyon Gage at Diversion Dam
Photovoltaic Pole at Middle Fork American River Gage below Oxbow Powerhouse
<b>Microwave Reflectors and Radio Towers</b>
Passive Microwave Reflector Station above Middle Fork Interbay
Radio Communications Tower near French Meadows – Hell Hole Tunnel Gatehouse
Radio Communications Tower and Repeater near Hell Hole – Middle Fork Tunnel Surge Shaft and Tank
Passive Microwave Reflector Station above Ralston Afterbay
<b>Disposal Sites</b>
Duncan Diversion Dam Sediment Disposal Area
North Fork Long Canyon Crossing Sediment Disposal Area
Middle Fork Interbay Sediment Disposal Area
Ralston Ridge Sediment Disposal Area
Indian Bar Sediment Disposal Area
<b>Ancillary Facilities</b>
French Meadows Dam Generator Building
French Meadows Dam Staging Area
Dormitory Facility
Dormitory and Cottages Water Supply Tank

**Table LAND 3-1. Existing Project Facilities and Features (continued).**

<b>Ancillary Facilities (continued)</b>
Hell Hole Staging Areas
Operator Cottages and Shop
Ralston Afterbay Dam Generator Building
Storage Building at Middle Fork – Ralston Tunnel Surge Shaft and Tank
Wabena Meadows Snow Course
Miranda Cabin Snow Course
Diamond Crossing Snow Course
Talbot Camp Snow Course
<b>Project Fences</b>
<b>Slope Fences</b>
French Meadows Powerhouse Penstock Rock Fence
French Meadows Powerhouse Slope Fence
Long Canyon Crossing Slope Fence
Middle Fork Powerhouse Upper Switchyard Slope Fence
Middle Fork Interbay Dam Slope Fence
Oxbow Powerhouse Slope Fence
Ralston Powerhouse Penstock and Butterfly Valve House Slope Fences
Ralston Powerhouse Slope Fence
<b>Public Safety Fences</b>
Dormitory Facility Barrier Fence
Hell Hole Dam General Parking Area Barrier Fence
North Fork Long Canyon Crossing Removable Section Barrier Fence
<b>Project Roads and Access Points</b>
<b>Duncan Creek Area</b>
Duncan Creek Diversion Intake Road and Diversion Pool Access Point
Duncan Creek Diversion Dam Road
Duncan Creek Diversion Pool Road and Access Point
<b>French Meadows Area</b>
Duncan Creek – Middle Fork Tunnel Portal Road and Spillway Access Point
French Meadows – Hell Hole Tunnel Gatehouse Road
French Meadows Dam Outlet Works and Leakage Weirs Road
French Meadows Dam Staging Area Road
Middle Fork American River Gage and Weir below French Meadows Dam Road <sup>a</sup>
<b>Hell Hole Area</b>
Hell Hole Dam and Powerhouse Road and Spillway Southern Access Point
Rubicon River Gage and Weir below Hell Hole Dam Road
Hell Hole Dam Leakage Weir Road
Hell Hole Dam Spillway Northern Access Point
French Meadows – Hell Hole Tunnel Portal Road
French Meadows Powerhouse Road
Hell Hole – Middle Fork Tunnel Gatehouse Road
Dormitory Facility Road
Hell Hole Dam Spillway Discharge Channel Road
<b>Long Canyon Area</b>
North Fork Long Canyon Diversion North Road
North Fork Long Canyon Diversion South Road
North Fork Long Canyon Diversion Drop Inlet Road

**Table LAND 3-1. Existing Project Facilities and Features (continued).**

<b>Project Roads and Access Points (continued)</b>
<b>Long Canyon Area (continued)</b>
South Fork Long Canyon Diversion and Drop Inlet Road
North Fork Long Canyon Crossing Removable Section North Road and Parking Area
North Fork Long Canyon Crossing Removable Section South Road <sup>b</sup>
<b>Middle Fork Interbay Area</b>
Middle Fork Powerhouse Butterfly Valve House Road <sup>c</sup>
Middle Fork Powerhouse Penstock and Butterfly Valve House Road
Middle Fork Interbay Dam and Powerhouse Road and Interbay Access Points
Middle Fork Powerhouse Upper Switchyard Road
<b>Ralston–Oxbow Area</b>
Brushy Canyon Adit Road (Project road segment is damaged and closed due to landslide) <sup>d</sup>
Oxbow Powerhouse Road
Ralston Powerhouse Butterfly Valve House Road
Ralston – Oxbow Tunnel Intake Road
Ralston Afterbay Road and Boat Ramp
Ralston Afterbay Dam Road and Afterbay Access Point
Ralston Afterbay Sediment Removal Access Point
<b>Project Trails</b>
<b>Duncan Creek Area</b>
Duncan Creek Diversion Dam North Trail
Duncan Creek Diversion Dam South Trail
Photovoltaic Poles and Powerline to Duncan Creek Gage above Diversion Dam Trail
Duncan Creek Gage and Weir above Diversion Trail
Duncan Creek Gage and Weir below Diversion Trail
<b>French Meadows Area</b>
Middle Fork American River Gage and Weir below French Meadows Dam Trail
<b>Middle Fork Interbay Area</b>
Middle Fork American River Gage above Middle Fork Powerhouse Trail
Passive Microwave Reflector Station above Middle Fork Interbay Trail
<b>Ralston Afterbay Area</b>
Passive Microwave Reflector Station above Ralston Afterbay Trail
Middle Fork American River Gage below Oxbow Powerhouse Trail

<sup>a</sup>This road was originally designated as a Project road in the PAD. The road is currently designated as a multi-use road on private property based on additional data gathering (see LAND 1 – Transportation System Technical Study Report – 2008, 2009).

<sup>b</sup>This road was originally designated as a Project road in the PAD. The road is currently divided into two segments with the first segment being designated as a multi-use road on Eldorado National Forest property outside the FERC Project boundary and the second segment designated as a Project road within the FERC Project boundary on PCWA land (see LAND 1 – Transportation System Technical Study Report – 2008, 2009).

<sup>c</sup>This road was originally designated as a Project road in the PAD. The road is currently divided into two segments with the first segment being designated as a multi-use road on private property outside the FERC Project boundary and the second segment designated as a Project road with the majority of the road located on Eldorado National Forest property outside the FERC Project boundary (see LAND 1 – Transportation System Technical Study Report – 2008, 2009).

<sup>d</sup>This road was originally designated as a Project road in the PAD. The road is currently divided into two segments with the first segment being designated as a multi-use road on private and Eldorado National Forest property outside the FERC Project boundary (NOTE: also a portion within FERC boundary) and the second segment designated as a Project road within Eldorado National Forest property outside the FERC Project boundary (see LAND 1 – Transportation System Technical Study Report – 2008, 2009).

**Table LAND 3-2. Project Recreation Facilities.**

---

<b>Project Recreation Facilities</b>
<b>French Meadows Area</b>
Ahart Campground
Coyote Group Campground
Poppy Campground
French Meadows Campground
Gates Group Campground
Lewis Campground
French Meadows Picnic Area
McGuire Picnic Area
French Meadows Boat Ramp
McGuire Boat Ramp
Dolly Creek Water Supply
French Meadows Campground Water Supply
<b>Hell Hole Area</b>
Big Meadows Campground
Hell Hole Campground
Upper Hell Hole Campground
Hell Hole Vista
Hell Hole General Parking Area
Hell Hole Boat Ramp Parking Area
Hell Hole Boat Ramp
Big Meadows Campground Water Supply
<b>Ralston Afterbay Area</b>
Ralston Picnic Area
Ralston Picnic Area Cartop Boat Ramp
Indian Bar Rafting Access and General Parking
<b>Long Canyon Area</b>
Middle Meadows Group Campground
Middle Meadows Group Campground Water Supply

**Table LAND 3-3. Potential Project Betterments.<sup>a</sup>**

---

<b>Hell Hole Reservoir Seasonal Storage Increase</b>
<b>Hell Hole Dam</b>
<b>Modified Facilities</b>
Hell Hole Dam Spillway Crest Gates
<b>New Facilities</b>
Hell Hole Dam Spillway Crest Gates Control Building
Hell Hole Dam Spillway Crest Gates Control Building Powerline
<b>Temporary Construction and Staging Areas</b>
Hell Hole Dam Spillway Crest Gates Construction Road
Hell Hole Dam Spillway Crest Gates Construction Work Area
Hell Hole Dam Spillway Crest Gates and Control Building Construction Staging Area
Hell Hole Dam Spillway Crest Gates Control Building Construction Work Area
Hell Hole Dam Spillway Crest Gates Control Building Powerline Construction Work Area
Hell Hole Dam Spillway Crest Gates Control Building Powerline Construction Staging Area

<sup>a</sup>The Hell Hole Reservoir Seasonal Storage Increase is the only Project Betterment that is currently under consideration.

**Table LAND 3-4. Dispersed Concentrated Use Areas.**


---

**Dispersed Concentrated Use Areas**

---

**French Meadows Reservoir Area**

Area near French Meadows-Hell Hole Tunnel Gatehouse

Area immediately downstream of French Meadows Dam (both sides of river)

Area located immediately northwest of French Meadows Dam

Area near bridge over the Middle Fork American River, upstream French Meadows Reservoir

**Duncan Creek Diversion Dam Area**

Area on north side of Duncan Creek Diversion Dam

Area near Duncan Creek Gage and Weir, upstream of Duncan Creek Diversion Dam

Area near new bridge crossing Duncan Canyon on the road to the Grizzly, etc.

**Hell Hole Reservoir Area**

Area on west side of Hell Hole Reservoir, between dam and Hell Hole Boat Ramp

Grey Horse Area

**Long Canyon Area**

Area surrounding South Fork Long Canyon Diversion Dam

Areas along South Fork Long Canyon Creek, downstream of South Fork Long Canyon Diversion Dam

**Middle Fork Interbay Area**

Shoreline area surrounding Middle Fork Interbay

**Ralston Afterbay Area**

Ralston Afterbay Sediment Disposal Area

Shoreline area surrounding Ralston Afterbay

Area along Middle Fork American River, between Ralston Picnic Area and the new gage

Area at confluence of North Fork of the Middle Fork American River and Middle Fork American River

Indian Bar, Willow Bar, and Junction Bar Areas

---

**Table LAND 3-5. Bypass and Peaking Reaches Associated with the Middle Fork Project.**

<b>River or Stream</b>	<b>Bypass Reach<sup>1</sup></b>
Middle Fork American River	French Meadows Dam to Middle Fork Interbay Middle Fork Interbay Dam to Ralston Afterbay
Duncan Creek	Duncan Creek Diversion Dam to the Middle Fork American River Confluence
Rubicon River	Hell Hole Dam to Ralston Afterbay
North Fork Long Canyon Creek	North Fork Long Canyon Diversion Dam to the Confluence of Long Canyon Creek
South Fork Long Canyon Creek	South Fork Long Canyon Diversion Dam to the Confluence of Long Canyon Creek
Long Canyon Creek	Confluence of North and South Forks of Long Canyon Creek to confluence of Rubicon River
	<b>Peaking Reach<sup>2</sup></b>
Middle Fork American River	Oxbow Powerhouse to the North Fork American River Confluence
North Fork American River	Middle Fork American River Confluence to the Folsom Reservoir High Water Mark

<sup>1</sup>Bypass reaches are those where water is rerouted from the stream or river at a diversion dam and reintroduced below a powerhouse.

<sup>2</sup>Peaking reaches are those reaches where daily and within-day changes in river flow occur as a result of power releases that are scheduled to follow power demand.

**Table LAND 3-6. Primary Contacts for LAND 3 Interviews and Data Gathering Effort.**

Primary LAND 3 Contact, Title	Study Element		
	PCWA Emergency Action Plan	PCWA Emergency Communication and Planning	Emergency Incident Data
<b>PCWA</b>			
Andy Fecko, Resource Planning Administrator			X
Steve Jones, Power Systems Manager	X		X
Marc Wyatt, Maintenance Supervisor		X	
<b>USDA - Forest Service</b>			
Mo Tebbe, Public Service Officer (TNF)			X
<b>CAL FIRE Grass Valley</b>			
Frank Quadro, Assistant Chief, South Division Operation			X
<b>CAL FIRE Camino</b>			
David Matzdorff, Fire Captain			X
<b>Placer County</b>			
Brett Storey, Senior Management Analyst			X
<b>Placer County Sheriff's Department</b>			
Richard Tornberg, Lieutenant, Sheriff's Department			X
<b>El Dorado County Sheriff's Department</b>			
Sgt. Bernie Morton			X
<b>California State Parks, Auburn State Recreation Area</b>			
Mike Lynch, Sector Superintendent			X
<b>Foresthill Fire Protection District</b>			
Kurt Snyder, Fire Chief			X
<b>Auburn City Fire Department</b>			
Mark D'Ambrogi, Fire Chief			X

**Table LAND 3-7. Summary of PCWA’s Planned Response Actions During an Emergency at French Meadows Dam, Hell Hole Dam, and Ralston Afterbay Dam.**

Actions to Stop Inflows	Actions to Maximize Releases	Actions if Dam Failure is Imminent
<b>French Meadows Dam</b>		
<ul style="list-style-type: none"> <li>• Stop Duncan Creek Diversion inflows by closing diversion tunnel gate, or by sliding plywood sheets over the intake trash rack.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase generation at French Meadows to maximum. If this is not possible, consider opening the turbine bypass valve 100% (powerhouse damage may occur).</li> <li>• If safe to do so, open the dam outlet works 60-inch Ring-Jet low level outlet to its maximum discharge capacity.</li> <li>• Open the dam spillway radial gates if the water level is above the spillway crest.</li> </ul>	<ul style="list-style-type: none"> <li>• Stop generation at Middle Fork, Ralston, and Oxbow powerhouses.</li> <li>• Close the Middle Fork and Ralston penstock butterfly valves. If time allows, close the turbine shutoff valves and tailrace stoplog gates.</li> </ul>
<b>Hell Hole Dam</b>		
<ul style="list-style-type: none"> <li>• Shut down French Meadows Powerhouse to stop inflow from French Meadows Reservoir.</li> <li>• Have the Sacramento Municipal Utilities District (SMUD) increase upstream diversions from their Rubicon Reservoir and Buck Island Reservoir into Loon Lake Reservoir to minimize inflow into Hell Hole Reservoir.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase generation to maximum at Middle Fork Powerhouse.</li> <li>• If safe to do so, shut down Hell Hole Powerhouse and open the dam outlet works 48-inch Howell-Bunger discharge valve to its maximum discharge capacity (powerhouse damage may occur).</li> <li>• Note: Hell Hole Dam has an uncontrolled or ungated spillway that cannot be regulated.</li> </ul>	<ul style="list-style-type: none"> <li>• Stop generation at Ralston and Oxbow powerhouses.</li> <li>• Close the Ralston penstock butterfly valve. If time allows, close the turbine shutoff valve and tailrace stoplog gate.</li> </ul>

**Table LAND 3-7. Summary of PCWA’s Actions During an Emergency at French Meadows Dam, Hell Hole Dam, and Ralston Afterbay Dam (continued).**

Actions to Stop Inflows	Actions to Maximize Releases	Actions if Dam Failure is Imminent
<b>Ralston Afterbay Dam</b>		
<ul style="list-style-type: none"> <li>• Shut down Middle Fork and Ralston powerhouses, if operating.</li> <li>• Close spillway gates and/or 60-inch low level outlet Ring-Jet valve at French Meadows Dam or 48-inch low level valve at Hell Hole Dam (if open).</li> <li>• Open Duncan Creek Diversion Tunnel gate (if closed), unless natural flows in Duncan Creek are minimal (&lt;about 10 cfs).</li> <li>• Request that SMUD halt substantial releases, if any, into the South Fork Rubicon River from Loon Lake and/or Gerle reservoirs.</li> </ul>	<ul style="list-style-type: none"> <li>• Open all five radial spill gates at Ralston Afterbay Dam. Flows must be ramped up as slowly as possible, commensurate to the risk of overall failure to the dam.</li> <li>• Increase generation to maximum at Oxbow Powerhouse, or open the turbine bypass valve to full open position.</li> <li>• If necessary, open the 72-inch low level outlet valve (sediment may be released).</li> </ul>	

Table LAND 3-8. Public Safety Signs Associated with the MFP.

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Hell Hole Reservoir Area</b>										
Hell Hole Dam and Powerhouse Road	Gate leading to road	Warning	1	Painted regular plywood sign mounted on steel chain link fence	18" x 36"	Fair	DANGER SLIDE AREA AHEAD DO NOT ENTER	Red lettering on yellow background. Bullet holes present.	Accessible by foot or vehicle- clear and visible, gravel ground	1
	Gate leading to road	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	18" x 20"	Poor	UNAUTHORIZED VEHICLES WILL BE TOWED AWAY AT OWNERS EXPENSE	Black lettering on white background. Bullet holes present.	Accessible by foot or vehicle- clear and visible, gravel ground	2
	Gate leading to road	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	18" x 12"	Poor	NO PARKING ANY TIME	Red lettering on white background. Bullet holes present.	Accessible by foot or vehicle- clear and visible, gravel ground	3
	Gate leading to road	Hazard	1	Painted aluminum sign mounted on steel chain link fence	12" x 36"	Poor	Red and white stripes (no wording)	Bullet holes present, faded in color	Accessible by foot or vehicle- clear and visible, gravel ground	
	Right side of gate leading to road	Trail Identification	1	Painted and engraved wooden post	81" x 3.5"	Good	HELL HOLE TRAIL 14E022	White lettering on brown background, vertical lettering	Accessible by foot or vehicle- clear and visible, gravel ground	
Hell Hole Powerhouse to Rubicon River Gage and Weir below Hell Hole Dam Communication Line/Powerline	Top of powerline poles along road to Hell Hole Powerhouse	Caution	2	Plastic signs mounted on top of wooden powerline poles	4" x 20" (Est.)	Fair	HIGH VOLTAGE	Clear cut-out lettering on yellow background	Hard to read, top of pole	
	On steel bar across powerline poles outside of Hell Hole Powerhouse	Caution	1	Plastic sign mounted on horizontal steel pole connecting powerline poles	4" x 20" (Est.)	Good	HIGH VOLTAGE	Clear cut-out lettering on yellow background	At top of pole, hard to read and unnoticeable	
Hell Hole Powerhouse	On building wall above front entrance	Warning	1	Sticker sign mounted on cement wall of building	7" x 10"	Good	DANGER HIGH VOLTAGE INSIDE UNAUTHORIZED PERSONS KEEP OUT PLACER COUNTY WATER AGENCY POWER SYSTEMS DIVISION	White lettering on red and black background, black lettering on white background	Hard to get to, easy to read, gravel underfoot	4
	On gate leading into tunnel at back of Hell Hole Powerhouse	Warning	1	Painted aluminum sign mounted on steel gate	7" x 10"	Good	DANGER FOLLOW CONFINED SPACE ENTRY PROCEDURE BEFORE ENTERING	White lettering on red and black background, black lettering on white background	Not very visible, only clear if heading into tunnel	5
Hell Hole - Middle Fork Tunnel Gatehouse and Intake	On sliding door front of Hell Hole - Middle Fork Tunnel Gatehouse	Regulatory	1	Painted aluminum sign mounted on aluminum door	7" x 10"	Poor	NO TRESPASSING	Brown lettering on black background. Faded and damaged, needs replacement.	Gravel underfoot, barely readable, no public vehicle access	
Hell Hole - Middle Fork Tunnel Gatehouse Road	Front of gate to Gatehouse Road	Regulatory	1	Painted aluminum sign mounted on metal gate	18" x 12"	Good	AUTHORIZED VEHICLES ONLY	Black lettering on white background	Very clear, good visibility, seen from road	6
Operator Cottages and Shop	Gate in front of driveway to Operator Cottages	Hazard	1	Painted aluminum sign mounted on metal gate	8" x 48"	Good	Red and white stripes (no wording)		Clear and visible along road	
	Gate in front of driveway to Operator Cottages	Road Identification	1	Painted aluminum sign mounted on metal gate	8" x 48"	Good	20775 SODA SPRINGS RIVERTON ROAD	Black lettering on white background	Clear and visible along road	7
Hell Hole Dam General Parking Area Barrier Fence	Next to fence by trail leading to Hell Hole Boat Ramp	Directional	1	Painted and engraved redwood board mounted on wooden post	21" x 35"	Good	TRAIL TO BOAT LAUNCHING RAMP USE HANDRAILS --> EL DORADO National Forest	White lettering on brown background	Clear, visible, paved underfoot	8
Dormitory Facility	Left side of driveway to Dormitory Facility	Part 8	1	Painted aluminum sign mounted on steel post	26" x 38"	Good	PLACER COUNTY WATER AGENCY MIDDLE FORK AMERICAN RIVER DEVELOPMENT A WATER CONSERVATION AND HYDRO ELECTRIC PROJECT COMPLETED 1967 DORMITORY	Black lettering on white background	Good visibility, easy to read, gravel underfoot	
	Front gate of fence surrounding Dormitory Facility	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	12" x 18"	Good	NO TRESPASSING	Black lettering on white background	Good visibility, easy to read, gravel underfoot	
Hell Hole Staging Areas	Perimeter fence by helipad	Regulatory	3	Painted aluminum sign mounted on steel chain link fence	8" x 11"	2 Poor 1 Fair	CLOSED AREA... UNITED STATES FOREST SERVICE	Black lettering on yellow background	Very small print, hard to read, gravel underfoot	

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Hell Hole Reservoir Area (continued)</b>										
French Meadows Powerhouse Road	Right side of beginning of French Meadows Powerhouse Road	Part 8	1	Painted aluminum sign with wooden border mounted on steel post	26" x 38"	Good	PLACER COUNTY WATER AGENCY MIDDLE FORK AMERICAN RIVER DEVELOPMENT A WATER CONSERVATION AND HYDRO ELECTRIC PROJECT COMPLETED 1967 FRENCH MEADOWS POWERHOUSE	Black lettering on white background	Clear visibility, on gravel road	
French Meadows Powerhouse and Switchyard	South side in gravel in front of French Meadows Powerhouse	Warning	1	Painted aluminum sign mounted on steel post	14" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background, sign bent but readable	Clear visibility, on gravel road	
	South side of French Meadows Powerhouse perimeter fence	Warning	1	Painted aluminum sign mounted on steel chain link fence	10" x 14"	Good	DANGER HIGH VOLTAGE KEEP OUT	White lettering on red and black background, black lettering on white background	Clear visibility, gravel underfoot	
	South side of French Meadows Powerhouse perimeter fence	Warning	1	Painted aluminum sign mounted on steel chain link fence	14" x 20"	Good	DANGER HIGH VOLTAGE	White lettering on red and black background, black lettering on white background	Clear visibility, gravel underfoot	
	South side of French Meadows Powerhouse perimeter fence	Warning	1	Painted aluminum sign mounted on steel chain link fence	7" x 14"	Good	DANGER HIGH VOLTAGE DO NOT ENTER	Red lettering on white background	Clear visibility, gravel underfoot	
Hell Hole Substation	All 4 sides of Hell Hole Substation perimeter fence	Warning	4	Painted plastic sign mounted on steel chain link fence	7" x 14"	Good	DANGER HIGH VOLTAGE	White lettering on red and black background, black lettering on white background	Clear visibility, gravel underfoot	
	Southeast side of Hell Hole Substation in parking area	Warning	1	Painted aluminum sign mounted on steel post	14" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Clear visibility, gravel underfoot	
French Meadows Powerhouse and Switchyard to Hell Hole-Middle Fork Tunnel Gatehouse Communication Line/ Powerline	Top of powerline poles next to substation	Caution	2	Plastic signs mounted on top of wooden powerline poles	4" x 10" (Est.)	Fair	HIGH VOLTAGE	Clear cut-out lettering on yellow background	Top of pole, hard to read	
French Meadows Powerhouse Penstock and Butterfly Valve House	Gate to road leading to valve house	Regulatory	1	Painted aluminum sign mounted on metal gate	18" x 12"	Good	AUTHORIZED VEHICLES ONLY	Black lettering on white background	Visible and clear from road	
<b>South Fork Long Canyon Area</b>										
South Fork Long Canyon Diversion Dam	On side of pipes by South Fork Long Canyon Diversion Pool	Informational	1	Sticker sign mounted on side of metal pipe	2" x 8"	Poor	STREAM FLOW MEASURING STATION	Black lettering on yellow background, faded and flaking	Accessible to anyone on dam- hard to read	
	Beginning of South Fork Long Canyon Diversion and Drop Inlet Road leading to South Fork Long Canyon Diversion Dam	Part 8	1	Painted aluminum sign mounted on steel post	24" x 36"	Good	PLACER COUNTY WATER AGENCY MIDDLE FORK AMERICAN RIVER DEVELOPMENT A WATER CONSERVATION AND HYDRO ELECTRIC PROJECT COMPLETED 1967 SOUTH FORK LONG CANYON DAM	Black lettering on white background	Easily seen by road, good visibility	9

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>North Fork Long Canyon Area</b>										
North Fork Long Canyon Diversion Dam	Beginning of North Fork Long Canyon Diversion Road leading to North Fork Long Canyon Diversion Dam	Part 8	1	Painted aluminum sign mounted on steel post	24" x 36"	Good	PLACER COUNTY WATER AGENCY MIDDLE FORK AMERICAN RIVER DEVELOPMENT A WATER CONSERVATION AND HYDRO ELECTRIC PROJECT COMPLETED 1967 NORTH FORK LONG CANYON DAM	Black lettering on white background	Clear- slightly under vegetation, but still visible from road	
	On 3 trees both sides at beginning of road	Regulatory	3	Painted aluminum signs mounted on incense cedar trees	9" x 11"	Good	BOUNDARY STATE GAME REFUGE HUNTING PROHIBITED DEPARTMENT OF FISH AND GAME	Black lettering on yellow background	Clear- slightly under vegetation, but still visible from road	
	Side of gaging station on west side of river	Informational	1	Painted plastic sign mounted on aluminum tank	8.5" x 10.5"	Poor	STREAM FLOW MEASURING STATION - U.S. GEOLOGICAL SURVEY IN COOPERATION WITH CA DEPARTMENT OF WATER RESOURCES	Black lettering on yellow background	Faded, hard to read, but easy to find	10
	Side of gaging station on east side of river	Informational	1	Sticker sign mounted on aluminum tanks	3" x 8"	Poor	STREAM FLOW MEASURING STATION	Black lettering on yellow background, faded and flaking	Poor, hard to read and high up	11
<b>French Meadows Reservoir Area</b>										
French Meadows- Hell Hole Tunnel Gatehouse	West door of French Meadows- Hell Hole Tunnel Gatehouse	Regulatory	1	Painted aluminum sign mounted on steel door	7" x 11"	Poor	NO TRESPASSING	Silver lettering on black background, visible signs of wear	Good access but poor contrast	
	North area of lot	Regulatory	1	Painted aluminum sign mounted on steel post	20" x 20"	Poor	VEHICLE TRAVEL PROHIBITED ALONG LAKESHORE	White lettering on brown background, post is good, sign is bent/ warped	Good contrast and fair access but with some tripping hazards nearby	12
	Fallen snag at north area of lot	Regulatory	1	Painted aluminum sign mounted on wooden pole	7" x 11"	Poor	NO CAMPING HERE	Black lettering on yellow background, fallen pole	Barely noticeable, needs remount	
	West entrance to lot	Regulatory	1	Painted aluminum sign mounted on live tree	7" x 11"	Poor	NO CAMPING HERE	Black lettering on yellow background, bent with gunfire damage	Good contrast, fair access	
Radio Communications Tower near French Meadows- Hell Hole Tunnel Gatehouse	Radio Communications Pole	Regulatory	1	Painted aluminum sign mounted on wooden powerline pole	7" x 11"	Good	NO CAMPING HERE	Black lettering on yellow background, partially obstructed by dangling wires	Good contrast and access	13
French Meadows Spillway	South access gate of French Meadows Spillway flood gates control platform	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	5" x 24"	Fair	NO TRESPASSING	White lettering on blue background, paint flaking	Good contrast and access	
	North access gate of French Meadows Spillway flood gates control platform	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	8" x 10"	Poor	NO TRESPASSING	White lettering on black background, extensive wear/fading	Fair contrast	14

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>French Meadows Reservoir Area (continued)</b>										
French Meadows Dam Generator Building	At FR96 turnout near French Meadows Dam Generator Building	Part 8	1	Painted steel sign mounted on steel post	22" x 36"	Fair	WELCOME TO THE FRENCH MEADOWS RESERVOIR RECREATIONAL AREA RECREATION FACILITIES ARE WITHIN THE MIDDLE FORK AMERICAN RIVER PROJECT OWNED BY THE PLACER COUNTY WATER AGENCY UNDER FEDERAL ENERGY REGULATORY COMMISSION LICENSE NUMBER 2079. RECREATION FACILITIES ARE OWNED OPERATED AND MAINTAINED BY THE U.S. FOREST SERVICE. FOR FURTHER RECREATION INFORMATION, PLEASE CONTACT: U.S.F.S FORESTHILL RANGER STATION, FORESTHILL, CALIFORNIA, OR PLACER COUNTY WATER AGENCY, FORESTHILL, CALIFORNIA ALL FACILITIES ARE OPEN TO THE PUBLIC WITHOUT DISCRIMINATION	Black lettering on white background, gunfire damage, flaking paint	Good contrast	
	At FR96 turnout near French Meadows Dam Generator Building	Informational	1	MDO plywood sign mounted on PTDF posts	40" x 84"	Fair	FRENCH MEADOWS RECREATION AREA TAHOE <i>National Forest</i> U.S. DEPARTMENT OF AGRICULTURE	Yellow lettering on brown background, flaking paint and gunfire damage	Fair contrast	15
	Just north of FR96 turnout near French Meadows Dam Generator Building	Informational	1	Bronze embossed plaque mounted on granite boulder	15" x 24"	Fair	PLACER COUNTY WATER AGENCY Middle Fork American River Development FRENCH MEADOWS RESERVOIR...	Bronze embossed lettering and graphic of Placer County and seal, signs of missing plaque below	Good contrast	
	Access gate to French Meadows Dam Generator Building	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	5" x 24"	Good	NO TRESPASSING	White lettering on blue background	Good contrast	
Duncan Creek- Middle Fork Tunnel Portal	At Duncan Creek- Middle Fork Tunnel Portal	Warning	1	Painted aluminum sign mounted on cement wall	24" x 24" (Est.)	Good	WARNING WATER MAY BE DISCHARGED IN THIS AREA AT ANY TIME IT IS EXTREMELY DANGEROUS - KEEP AWAY PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Good contrast	16
Middle Fork American River Gage and Weir below French Meadows Dam	Door of gaging station building	Informational	1	Painted plastic sign mounted on aluminum tank	6" x 11"	Good	STREAMFLOW MEASURING STATION - U.S. GEOLOGICAL SURVEY	Black lettering on yellow background	Good contrast	17
	Opposite outside walls of gage trolley	Warning	2	Painted/ stenciled sign on side of steel structure	9" x 12"	Fair	WARNING NO TRESPASSING	Red lettering on black background, stenciled	Fair contrast	
French Meadows Dam and Outlet Works	South wall of dam discharge house	Unknown (missing)	1	Unknown sign, removed from side of cement wall	12" x 14"	N/A	Unknown, no graphics or wording	Removed or missing sign	N/A	
<b>Duncan Creek Area</b>										
Duncan Creek Gage and Weir above Diversion Dam	Trolley outside basket wall at gaging station	Regulatory	1	Painted/ stenciled sign on side of steel structure	8" x 12"	Poor	WARNING NO TRESPASSING	Red lettering on black background, overlapping with sign below	Poor contrast	
	Opposite outside walls of trolley basket at gage station	Regulatory	2	Painted/ stenciled sign on side of steel structure	5" x 30"	Fair	NO TRESPASSING	Yellow lettering on black background	Fair contrast	18
	South face of gaging station building	Regulatory	1	Painted/ stenciled sign on side of steel structure	5" x 30"	Fair	NO TRESPASSING	Yellow lettering on silver background	Fair contrast, somewhat blurry	
Duncan Creek - Middle Fork Tunnel Intake	On faceplate of generator at Duncan Creek - Middle Fork Tunnel controls platform	Warning	1	Sticker sign mounted on metal equipment	2" x 8"	Good	CAUTION LIVE TERMINALS WITHIN	White lettering on red background, primarily intended for workers	Good contrast but viewable only at close range	19
Duncan Creek Gage and Weir below Diversion Dam	Main access door of gaging station building	Informational	1	Painted plastic sign mounted on aluminum tank	6" x 11"	Good	STREAMFLOW MEASURING STATION - U.S. GEOLOGICAL SURVEY	Black lettering on yellow background	Good contrast	

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Middle Fork Interbay Area</b>										
Middle Fork Powerhouse Butterfly Valve House to Radio Repeater near Hell Hole- Middle Fork Tunnel Surge Tank Communication Line/Powerline	Electrical box on power pole near Middle Fork Powerhouse Butterfly Valve House	Warning	1	Sticker sign mounted on metal equipment	2" x 8"	Good	GE HEAVY DUTY SAFETY SWITCH DANGER!	White lettering on black background and white lettering on red background. Likely intended primarily for workers.	Small and viewable up-close only	20
	Electrical box on power pole near Middle Fork Powerhouse Butterfly Valve House	Warning	1	Paper label attached to metal equipment	3" x 4"	Good	DANGER EQUIPMENT LOCKED OUT	White lettering on red and black background, and black lettering on white background with red hazard stripes, likely intended for workers	Good contrast but small and viewable up close only	
Middle Fork Powerhouse to Middle Fork Powerhouse Butterfly Valve House Communication Line/Powerline	Top of power poles network extending from Middle Fork Powerhouse Butterfly Valve House to switchyards	Caution	2 per pole	Plastic signs mounted on top of wooden powerline poles	4" x 12"	Good	HIGH VOLTAGE	Clear cut-out lettering on yellow background	Adequate	
Middle Fork Powerhouse Penstock and Butterfly Valve House Road		Warning	1	Painted aluminum sign on metal pole	6" x 12" (Est.)	Fair	WARNING HIGH VOLTAGE ELECTRIC LINE BURIED BELOW CALL BEFORE YOU DIG PCWA...	Orange and white lettering on blue background; paint is peeling	Good contrast and viewable up close	21
Middle Fork Powerhouse Upper Switchyard	Main access gate and fence along perimeter	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	5" x 24"	Good	NO TRESPASSING	White lettering on blue background, faded	Fair contrast and good access	
	Main access gate and fence along perimeter	Warning	1	Painted aluminum sign mounted on steel chain link fence	7" x 15"	Fair	DANGER HIGH VOLTAGE DO NOT ENTER	Red lettering on white background, gunfire damage	Good contrast and access	22
Middle Fork Powerhouse to Middle Fork- Ralston Tunnel Intake and Gatehouse Communication Line/Powerlines	Mounted on power pole #321	Informational	1	Written aluminum sign mounted on wooden powerline pole	3" x 15"	Fair	RADIO 20' --> PG&E	Handwritten lettering with black marker on silver background, intended for workers	Fair contrast and good access	
	Mounted on power pole #327	Caution	2	Plastic signs mounted on top of wooden powerline poles	4" x 12" (Est.)	Good	HIGH VOLTAGE	Clear cut-out lettering on yellow background	Fair contrast	
Middle Fork Powerhouse Lower Switchyard	Near main access gate at culvert	Regulatory	1	Steel/Aluminum on chain link fence	20" x 20"	Fair	UNAUTHORIZED VEHICLES WILL BE TOWED AWAY AT OWNERS EXPENSE	Black lettering on white background, peeling paint and vegetation overgrowth	Fair contrast and access - ditch prevents close access	
	Near main access gate at culvert	Warning	2	Painted aluminum sign mounted on steel chain link fence	10" x 15"	Good	DANGER HIGH VOLTAGE KEEP OUT	White lettering on red and black background, black lettering on white background	Good contrast and fair access - ditch prevents close access	
	On main access gate	Warning	1	Painted aluminum sign mounted on steel chain link fence	7" x 15"	Good	DANGER HIGH VOLTAGE	Red lettering on white background, flaking paint	Good contrast and access	
	On main access gate	Regulatory	2	Painted aluminum sign mounted on steel chain link fence	5" x 24"	Good	NO TRESPASSING	White lettering on blue background, faded	Fair contrast and good access	
	On perimeter fence near main gate	Warning	1	Painted aluminum sign mounted on steel chain link fence	15" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Good contrast and access	
	On perimeter fence north of main gate	Warning	1	Painted aluminum sign mounted on steel chain link fence	7" x 10"	Good	DANGER HIGH VOLTAGE UNAUTHORIZED PERSONNEL KEEP OUT	White lettering on red and black background, black lettering on white background	Good contrast and access	23
	Above Middle Fork Powerhouse discharge into Interbay	Warning	1	Painted aluminum sign mounted on steel railing	24" x 42" (Est.)	Good	EXTREME DANGER KEEP AWAY	White lettering on green background, intended primarily for boaters and fishermen	Good contrast	

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Middle Fork Interbay Area (continued)</b>										
Middle Fork Interbay Dam and Powerhouse Road and Interbay Access Points	Start of the road	Warning	1	Painted aluminum sign mounted on steel poles	15" x 20"	fair	WARNING THIS ROAD IS STEEP CROOKED AND HAZARDOUS NO TRAILERS OR BOATING PERMITTED NO OVERNIGHT CAMPING PERMISSION TO PASS REVOCABLE AT ANY TIME	Red and white lettering on blue background, flaking paint	Fair contrast and good access	
Middle Fork Interbay Dam	Top of stairs at southwest end of Middle Fork Interbay Dam	Warning	1	Painted aluminum sign mounted on steel mesh fence	15" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Good contrast and access	
	West side of Middle Fork Interbay Dam top on each access gate of floodgates control platform	Regulatory	2	Painted aluminum sign mounted on steel chain link fence	12" x 19"	Good	NO TRESPASSING	Black lettering on white background	Good contrast and access	
	Northeast end of Middle Fork Interbay Dam at portal to boat launch	Warning	1	Painted aluminum sign mounted on steel pole	14" x 22"	Fair	WARNING SPILLWAY GATES MAY SUDDENLY OPEN AT ANY TIME IT IS EXTREMELY DANGEROUS PLACER COUNTY WATER AGENCY	Black lettering on yellow background, words may have been painted over	Good contrast and access	24
	Near PCWA plaque at Road 96.17 turnout	Warning	1	Painted aluminum sign mounted on steel pole	15" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Good contrast and access	
	At Road 96.17 turnout just west of dam	Informational	1	Bronze embossed plaque mounted on stone	15" x 24"	Good	PLACER COUNTY WATER AGENCY Middle Fork American River Development INTERBAY...	Bronze plaque with embossed lettering and graphic of Placer County and seal, type of monument	Good contrast and access	
<b>Ralston - Oxbow Area</b>										
Middle Fork - Ralston Tunnel Surge Shaft, Tank, and Storage Building	On road-side (FR23) perimeter fence of Tank Storage Building	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	4" x 24"	Good	NO TRESPASSING	White lettering on blue background	Easily visible and readable from road	25
	On road-side (FR23) wall of storage tank inside perimeter fence	Warning	2	Sticker sign mounted on aluminum tanks	10" x 14" (Est.)	Good	DANGER...	White lettering on red and black background, black lettering on white background	Couldn't read rest of sign besides "danger," poor visibility	
Ralston Powerhouse and Switchyard	Ralston Powerhouse and Switchyard	Warning	3	Painted aluminum signs mounted to steel chain link fence (2) and cement column (1)	14" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Easily readable from a distance, clear area underfoot	26
	North gate area along FR23	Hazard	8	Painted aluminum signs mounted on steel posts	36" x 12"	Good	Red and white stripes (no wording)	Blocking public entrance to powerhouse	Along road, easy to see	
	North side of perimeter fence	Site Identification	1	Painted redwood board mounted on steel railing	24" x 12" (Est.)	Good	RALSTON POWER HOUSE	White painted lettering engraved on brown wooden background	Fairly small to see from road, not accessible by foot	
	Back to back off water side of Ralston Powerhouse	Warning	2	Painted aluminum sign mounted on side of building	24" x 36" (Est.)	Good	EXTREME DANGER KEEP AWAY	White lettering on green background	Readable from boat, not road	27
	North side of perimeter fence	Part 8	1	Painted aluminum sign attached to steel chain link fence	24" x 36"	Good	PLACER COUNTY WATER AGENCY MIDDLE FORK AMERICAN RIVER DEVELOPMENT A WATER CONSERVATION AND HYDRO ELECTRIC PROJECT COMPLETED 1967 RALSTON POWERHOUSE	Black lettering on white background	Readable on foot or vehicle, on side of gravel road	
	North side of perimeter fence	Warning	1	Painted aluminum sign attached to steel chain link fence	10" x 24"	Good	EXTREME DANGER PLEASE STAY OUT	White lettering on blue background	Readable on foot or vehicle, on side of gravel road	28
North side of perimeter fence	Road Identification	1	Painted aluminum sign attached to steel chain link fence	12" x 18"	Good	9200 BLACKSMITH FLAT ROAD	Black lettering on white background	Readable on foot or vehicle, on side of gravel road		

Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Ralston - Oxbow Area (continued)</b>										
Ralston Powerhouse and Switchyard (continued)	All along perimeter fence	Warning	14	Painted aluminum sign mounted on steel chain link fence	7" x 10"	Good	DANGER HIGH VOLTAGE UNAUTHORIZED PERSONNEL KEEP OUT	White lettering on red and black background, black lettering on white background	Readable on foot or vehicle, on side of gravel road	
	Painted on cement block inside perimeter fence	Hazard	3	Painted stickers on side of cement block	36" x 60" (Est.)	Good	DIESEL NO SMOKING FLAMMABLE	Red painted lettering on white background, no public access	Inside perimeter fence, visible from right outside fence	29
	South side of Ralston Powerhouse attached to cable box going across river	Regulatory	2	Painted aluminum sign mounted on steel gate	7" x 10" (Est.)	Good	NOTICE NO TRESPASSING	White lettering on brown background	Readable from road, good clear visibility	
Ralston Powerhouse Slope Fence	On ladder leading up to power lines and slope fence	Regulatory	1	Painted aluminum sign mounted on steel ladder	7" x 10"	Poor	NO TRESPASSING	Red lettering on white background, faded and not functional	Right next to road, but not clearly visible, weather damaged, hard to see and almost unreadable	
	On ladder leading up pipeline and slope fence	Regulatory	1	Painted aluminum sign mounted on steel ladder	7" x 10"	Poor	NO TRESPASSING	Brown lettering on black background, faded and not functional	¼ way up ladder- only seen if already climbing, almost unreadable	
Ralston Afterbay Dam	Fence closing off access across Ralston Afterbay Dam	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	4" x 24"	Good	NO TRESPASSING	White lettering on blue background	Clear and readable, on paved ground	
Ralston Afterbay Dam Road and Access Point	South bank of afterbay	Warning	1	Painted aluminum sign mounted on steel ladder	12" x 10"	Fair	DANGER NO BOATS BEYOND THIS POINT	White and black lettering on re, black, and white background. Sign is twisted and bent.	Fairly small to see from within the afterbay	
Ralston Afterbay Dam Generator Building	South side of perimeter fence of Ralston Afterbay Dam Generator Building	Regulatory	1	Painted aluminum sign mounted on steel chain link fence	4" x 24"	Good	NO TRESPASSING	White lettering on blue background	Readable, gravel underfoot, clear area	
	Gravel parking area in front of Ralston Afterbay Dam Generator Building	Warning	1	Painted aluminum sign mounted on steel pole	14" x 22"	Good	WARNING WATER MAY BE DISCHARGED IN THIS AREA AT ANY TIME. IT IS EXTREMELY DANGEROUS PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Accessible by road or foot, gravel, clear area	
	East side on door of building inside perimeter fence	Safety	1	Sticker sign mounted on metal door	18" x 24" (Est.)	Good	FLAMMABLE NO SMOKING OR OPEN FLAME PERMITTED WITHIN 25 FEET	White lettering on red background and black lettering on white background	Inside perimeter fence, easily visible and readable	30
Ralston - Oxbow Tunnel Intake	Railing around Ralston - Oxbow Tunnel Intake	Warning	1	Painted aluminum sign mounted on metal railing	10" x 14"	Good	DANGER DO NOT ENTER IF LOW OXYGEN ALARM SOUNDS	White lettering on red and black background, black lettering on white background	Visible and readable only if already on tunnel structure	31
Oxbow Powerhouse and Switchyard	South side of perimeter fence	Road Identification	1	Painted aluminum sign mounted on steel chain link fence	12" x 18"	Good	9600 BLACKSMITH FLAT ROAD	Black lettering on white background	Readable by road or foot, gravel underfoot, clear area	
	South side of perimeter fence	Regulatory	2	Painted aluminum sign mounted on steel chain link fence	4" x 24"	Good	NO TRESPASSING	White lettering on blue background	Readable by road or foot, gravel underfoot, clear area	
	South side of perimeter fence	Warning	3	Painted aluminum sign mounted on steel chain link fence	7" x 10"	Good	DANGER HIGH VOLTAGE UNAUTHORIZED PERSONNEL KEEP OUT	White lettering on red and black background, black lettering on white background	Readable by road or foot, gravel underfoot, clear area	
	Side of outlet tunnel by rafting put in	Warning	1	Painted aluminum sign mounted on cement side of tunnel	14" x 20"	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background	Seen only if at rafting put in point, but easily visible and clear to read	

**Table LAND 3-8. Public Safety Signs Associated with the MFP (continued).**

Location <sup>1</sup>	Type of Sign <sup>2</sup>	Quantity	Materials <sup>3</sup>	Dimensions	Condition <sup>4</sup>	Wording/ Graphics	Remarks	Accessibility Notes	Photo #	
<b>Ralston - Oxbow Area (continued)</b>										
Indian Bar Rafting Access and General Parking	East side of boat launch, near boat launch toilet	Warning	1	Painted aluminum sign on steel post	15" x 20" (Est.)	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background. Post is slightly rusted.		
	Near parking area, west of parking area toilet	Warning	1	Painted aluminum sign on steel post mounted in barrier rock	15" x 20" (Est.)	Good	WARNING WATER LEVEL MAY SUDDENLY RISE IN THIS AREA AT ANY TIME PLACER COUNTY WATER AGENCY	Black lettering on yellow background. Post is slightly rusted.		
	At top of Indian Bar Rafting Access and General Parking Access Road	Warning	1	Painted aluminum sign on steel post, with steel cross bars	15" x 20" (Est.)	Fair	WARNING WATER MAY BE DISCHARGED IN THIS AREA AT ANY TIME IT IS EXTREMELY DANGEROUS PLACER COUNTY WATER AGENCY	Black lettering on yellow background. Post and cross bars are rusted. Paint is flaking.	Lettering may not be visible to visually impaired.	
Drivers Flat Road	Before gate	Regulatory	1	Painted aluminum sign on steel post	12" x 18" (Est.)	Poor	CAMPFIRES NOT ALLOWED DUE TO EXTREME FIRE DANGER	White lettering on brown background. Bullet holes		32
	Before gate	Caution	1	Painted aluminum sign on steel post	12" x 18" (Est.)	Good	ROUGH ROAD VEHICLES WITH LOW CLEARANCE NOT RECOMMENDED	Black lettering on white background		32
	Before gate	Informational/ Educational	1	Metal signs posted on MDO Plywood message board	36" x 36" (Est.)	Good	RATTLESNAKE, MOUNTAIN LION, AND POISON OAK WARNING SIGNS; KEEP DOG ON LEASH SIGN	Brown lettering on white or tan background posted on message board.		33
Area of confluence of North Fork of the Middle Fork American River and Middle Fork American River	On beach area under bridge at confluence	Informational/ Educational	1	Painted foam board mounted to PTFD posts	48" x 96"	Good	KIDS DON'T FLOAT GIVE THEM SOMETHING THAT WILL - LIFE VEST LOAN PROGRAM BORROW AND RETURN	Black, green, and red lettering on white background, no life vests present, provided by local clubs	Easily seen along shore or in water, good clear printing	34

<sup>1</sup>Refer to Map LAND 3-2 for Project facility locations.

<sup>2</sup>Types of signs: Informational, Warning, Directional, Caution, Road/ Site Identification, Hazard, Regulatory, or Informational/ Educational

<sup>3</sup>Materials Abbreviations: PTFD - Pressure Treated Douglas Fir; MDO Plywood - Medium Density Overlay Plywood

<sup>4</sup>Condition: **Poor** - Sign is no longer functional or it is so damaged it should be replaced; **Fair** - Sign is functional but needs repairs or maintenance (flaking paint, fading, damaged mounts); **Good** - Sign is new or in good, undamaged condition

**Table LAND 3-9. Buoy and Log Boom Associated with the MFP.**

Location	Structure Type	Placement	Photograph Number (see Appendix D)
Hell Hole Dam	Log Boom	Across spillway	HHD1
French Meadows Dam	Log Boom	Across spillway	FMD1
Ralston Afterbay Dam	Log Boom	Across spillway	RAD1
Middle Fork Interbay Dam	Log Boom	Across spillway	MFID1
Duncan Creek Diversion Dam	Log Boom	Across spillway	DDD1
McGuire Campground	Buoy	Across beach	MC1

**Table LAND 3-10. Summary of Flow-related Emergency Incidents in the Vicinity of the MFP.**

Date	Location	Incident Summary	Action
May 30, 1994	Middle Fork American River near Mammoth Bar	A young girl was trapped on a rock in the middle of the river when water levels in the river began to rise due to releases from Oxbow Powerhouse. The girl was rescued safely by an adult, but he was injured when he attempted to get out of the water. He suffered a concussion, head gash, and various scrapes. He was taken to the hospital. No emergency responders were contacted. Based on flow records, the river rose 2.77 feet in a two hour period.	The area is managed by California State Parks and patrolled by state park rangers. PCWA has no authority to install additional signs in this area without their permission. PCWA recommended that California State Parks consider installing an additional sign at the entrance to the Mammoth Bar Recreation Area to warn the public that the water flow and elevation can increase considerably.
May 15, 1999	Middle Fork American River just downstream of Middle Fork Interbay Dam	<p>There are two ways to access this reach of river: (1) by a stairway located 200 feet downstream of the dam's right abutment that ends at an old concrete weir, and (2) by a short ladder and long stairway located at the left abutment of the dam. A sign warning that water may be discharged at any time was located on the stairs near the concrete weir.</p> <p>On May 15, 1999, four people (one adult and three minors) descended down to the river using the short ladder and long stairway located at the left abutment of the dam. While the family was fishing along the river, Middle Fork Interbay Dam spilled. No emergency responders were contacted. No injuries or deaths resulted, although fish tackle was lost.</p>	<p>PCWA immediately added additional signage about possible water discharges above the short ladder access down to the river and placed a siren on the dam to provide an estimated 15 to 20 seconds warning before the spillway radial gates open.</p> <p>PCWA took measures to prevent public access down to the river at this location, by fencing off the stairways and removing the ladder in summer of 2000.</p>

**Table LAND 3-10. Summary of Flow-related Emergency Incidents in the Vicinity of the Middle Fork Project (continued).**

Date	Location	Incident Summary	Action
June 14, 2008	Middle Fork American River near Mammoth Bar	<p>A woman was trapped on a rock in the middle of the river when water levels in the river began to rise due to increased flows caused by a unit start up at the Oxbow Powerhouse. She did not realize that the water levels were rising before it was too late to safely leave the rock. Based on the California State Departments of Water Resources California Data Exchange Center (CDEC) records, the maximum rise in water level was somewhat less than 1.5 feet per hour.</p> <p>A large sign warning people of strong currents, fluctuating water levels, and changing conditions was posted at the head of trail down to the river at the location where the incident occurred, which is the only access point.</p> <p>An initial 911 call reported people in the water. CAL FIRE, California State Parks, the California Highway Patrol (CHP), Placer County Sheriff's Department, and a swiftwater rescue team responded and worked together on the emergency.</p>	<p>In FERC's July 31, 2008 letter to PCWA, FERC requested PCWA to work with the California Department of Parks and Recreation to arrange for the posting of warning signs at all parking areas along the highway in the general access areas. FERC also requested that specific information be provided on the signs that clearly identify the hazardous conditions that can occur in the bouldery area resulting from project operations that can quadruple the river flow in a little over an hour and can raise the water stage more than 1 foot in an hour. The proposed sign locations and text was provided to FERC by August 20, 2008. FERC urged PCWA to install the signs and provide a progress report to FERC by September 15, 2008.</p> <p>In PCWA's October 31, 2008 letter to the Commission, PCWA provided a schedule for installation of five new public warning signs at the confluence areas of the Middle and North Forks of the American rivers.</p>

**Table LAND 3-11. Summary of Emergency Incident Responses to MFP Facilities by Location and Incident Type.**

Agency <sup>2</sup>	Year	Incident Location <sup>1</sup>																											
		Hell Hole Reservoir Area				French Meadows Reservoir Area								Duncan Creek Area	Long Canyon Area	Middle Fork Interbay Area	Ralston Afterbay Area				Total	Fire	Law Enforcement	Public/ Agency Assistance/ Service	Engineering	Total			
		Big Meadows Campground	Hell Hole Boat Ramp	Hell Hole Campground	Hell Hole Dam	French Meadows Boat Ramp	French Meadows Campground	French Meadows Reservoir	French Meadows Dam	Ahart Campground	Coyote Campground	Lewis Campground	McGuire Picnic Area/Poppy Campground		Middle Meadows Group Campground	Middle Fork Interbay Area	Ralston Afterbay	Near Ralston Powerhouse	Ralston Picnic Area	Ralston Powerhouse									
Placer County Sheriff's Department	2006					1	2													1				4		3	1		4
	2007					2		1																3		2	1		3
Foresthill Fire Protection District	2006																			1				1			1		1
	2007																							0					0
Grass Valley CAL FIRE <sup>3</sup>	2006																						0						0
	2007																							0					0
Camino CAL FIRE <sup>4</sup>	2006																						0						0
	2007																							0					0
USDA-FS Tahoe National Forest	2006						4		2	1	1	2					1	5	1	2	1		20	4	9	6	1	20	
	2007					1	4			3		1	1										10	2	5	3		10	
USDA-FS Eldorado National Forest <sup>5</sup>	2006	4	6	7	2											3						23	1	21	1		23		
	2007	1	4	4	4											6							19	1	17	1		19	
El Dorado County Sheriff's Department	2006																						0					0	
	2007																							0					0
<b>Total</b>		<b>5</b>	<b>10</b>	<b>11</b>	<b>6</b>	<b>1</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>80</b>	<b>8</b>	<b>57</b>	<b>14</b>	<b>1</b>	<b>80</b>			

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>2</sup>California State Parks is not a primary responder to emergency incidents and the data do not reflect mutual aid that they may have provided.

<sup>3</sup>The Grass Valley CAL FIRE data set included responses by CAL FIRE, Auburn City Fire, Foresthill Fire Protection District, and Placer County Fire. None of these agencies responded to incidents that occurred at MFP facilities.

<sup>4</sup>A subset of the data provided by the Camino CAL FIRE was identical to the dataset provided by the USDA-FS Eldorado National Forest. These data are included in the data summary for the USDA-FS Eldorado National Forest only.

<sup>5</sup>This emergency response dataset is identical to a subset of the data provided by the Camino CAL FIRE. These data are reported here.

**Table LAND 3-12. Summary of Emergency Incident Responses in the Vicinity of the MFP by Location and Incident Type.**

Agency <sup>2</sup>	Year	Incident Location <sup>1</sup>											Incident Type					
		Hell Hole Reservoir Area			French Meadows Reservoir Area			Duncan Creek Area	Long Canyon Area		Middle Fork Interbay Area	Ralston Afterbay Area	Total	Search and Rescue (including Dive Team Calls)	Law Enforcement	Public/ Agency Assistance/ Service	Other <sup>4</sup>	Total
		Hell Hole Ranger Station	Hell Hole Picnic Area/Soda Springs Road	14N09C / Boundary Road	French Meadows Reservoir Area	Admin Site	Talbot Campground		Long Canyon Dispersed Campground <sup>3</sup>	FR2 near 14N16								
Placer County Sheriff's Department	2006	4			5								9	3	2	3	1	9
	2007	7			5		1		1				14	2	6	5	1	14
Grass Valley CAL FIRE <sup>5</sup>	2006												0					0
	2007												0					0
Camino CAL FIRE <sup>6</sup>	2006												0					0
	2007												0					0
USDA-FS Tahoe National Forest	2006				3								3		2	1		3
	2007				5	1							6		5	1		6
USDA-FS Eldorado National Forest <sup>7</sup>	2006	3		3									6	1	5			6
	2007	7	1						1				9		7		2	9
El Dorado County Sheriff's Department	2006												0					0
	2007												0					0
<b>Total</b>		<b>21</b>	<b>1</b>	<b>3</b>	<b>18</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>6</b>	<b>27</b>	<b>10</b>	<b>4</b>	<b>47</b>

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>2</sup>California State Parks is not a primary responder to emergency incidents and the data do not reflect mutual aid that they may have provided.

<sup>3</sup>Exact location of incident is unknown.

<sup>4</sup>Other: Includes referrals to other agencies and miscellaneous (e.g. hydrant maintenance, CDF injury, break-ins, hardware failures) and display incidents (burning of propane tanks or other types of display information).

<sup>5</sup>The Grass Valley CAL FIRE data set included responses by CAL FIRE, Auburn City Fire, Foresthill Fire Protection District, and Placer County Fire. None of these agencies responded to incidents that occurred in the vicinity of the MFP.

<sup>6</sup>A subset of the data provided by the Camino CAL FIRE was identical to the dataset provided by the USDA-FS Eldorado National Forest. These data are included in the data summary for the USDA-FS Eldorado National Forest only.

<sup>7</sup>This emergency response dataset is identical to a subset of the data provided by the Camino CAL FIRE. These data are reported here.

Table LAND 3-13. Summary of Emergency Incident Responses in the Vicinity of the Peaking Reach.

Agency	Year	Incident Location <sup>1</sup>													Incident Type							
		On the Peaking Reach								In the Vicinity of the Peaking Reach					Medical	Search and Rescue (including Dive Team Calls)	Water Rescue/ High Angle/ Drowning	Fire	Law Enforcement	Public/ Agency Assistance/ Service	Other <sup>2</sup>	Total
		Horseshoe Bar	Cherokee Bar	Murderer's Bar Rapid	Confluence of North Fork and Middle Fork American River or North Fork American River	No Hands Bridge	Robie Point	China Bar	Total	Mammoth Bar Recreation Area	North Fork American River at Hwy 49/Old Foresthill Road/Foresthill Bridge	Quarry Trail Access	Ruck a Chucky Area/ Drivers Flat Road	Total								
Placer County Sheriff's Department	2006								0	2	25		5	32	1	2	1		22	6		32
	2007								0	3	34		6	43	1	3	2		29	8		43
Grass Valley CAL FIRE <sup>3</sup>	2006								0		1			1							1	1
	2007								0	1	3		1	5							5	5
Camino CAL FIRE <sup>4</sup>	2006								0		25	3		28	13					1	14	28
	2007								0		17	2		19	7	2		3		2	5	19
Foresthill Fire Protection District <sup>5</sup>	2006								0				1	1	1							1
	2007				1				1				3	3	1		1	2				4
Auburn City Fire <sup>5</sup>	2006								0		1			1	1							1
	2007								0		2			2	2							2
Placer County Fire <sup>5</sup>	2006								0	11	36			47	35			5	4	3		47
	2007								0	17	36			53	43			3	2	3	2	53
California State Parks <sup>6</sup>	2006		4	2	131		3		140	75	12	18	38	143	25	2		2	241	5	8	283
	2007	1	8	2	149	7	3	1	171	98	32	24	34	188	36	7		8	304	3	1	359
USDA-FS Tahoe National Forest	2006								0					0								0
	2007	1							1					0	1							1
USDA-FS Eldorado National Forest <sup>7</sup>	2006								0					0								0
	2007								0					0								0
El Dorado County Sheriff's Department	2006								0					0								0
	2007								0					0								0
<b>Total</b>		<b>2</b>	<b>12</b>	<b>4</b>	<b>281</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>313</b>	<b>207</b>	<b>224</b>	<b>5</b>	<b>88</b>	<b>524</b>	<b>167</b>	<b>16</b>	<b>4</b>	<b>23</b>	<b>602</b>	<b>31</b>	<b>36</b>	<b>879</b>

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>2</sup>Other: Includes referrals to other agencies, unspecified, and miscellaneous (e.g. hydrant maintenance, CDF injury, break-ins, hardware failures) and display incidents (burning of propane tanks or other types of display information).

<sup>3</sup>Grass Valley CAL FIRE provided data that included responses by CAL FIRE and other agencies and local departments. The total presented includes only the incidents to which CAL FIRE responded. The other incidents are reported by each respective agency.

<sup>4</sup>A subset of the data provided by the Camino CAL FIRE was identical to the dataset provided by the USDA-FS Eldorado National Forest. These data are included in the data summary for the USDA-FS Eldorado National Forest only.

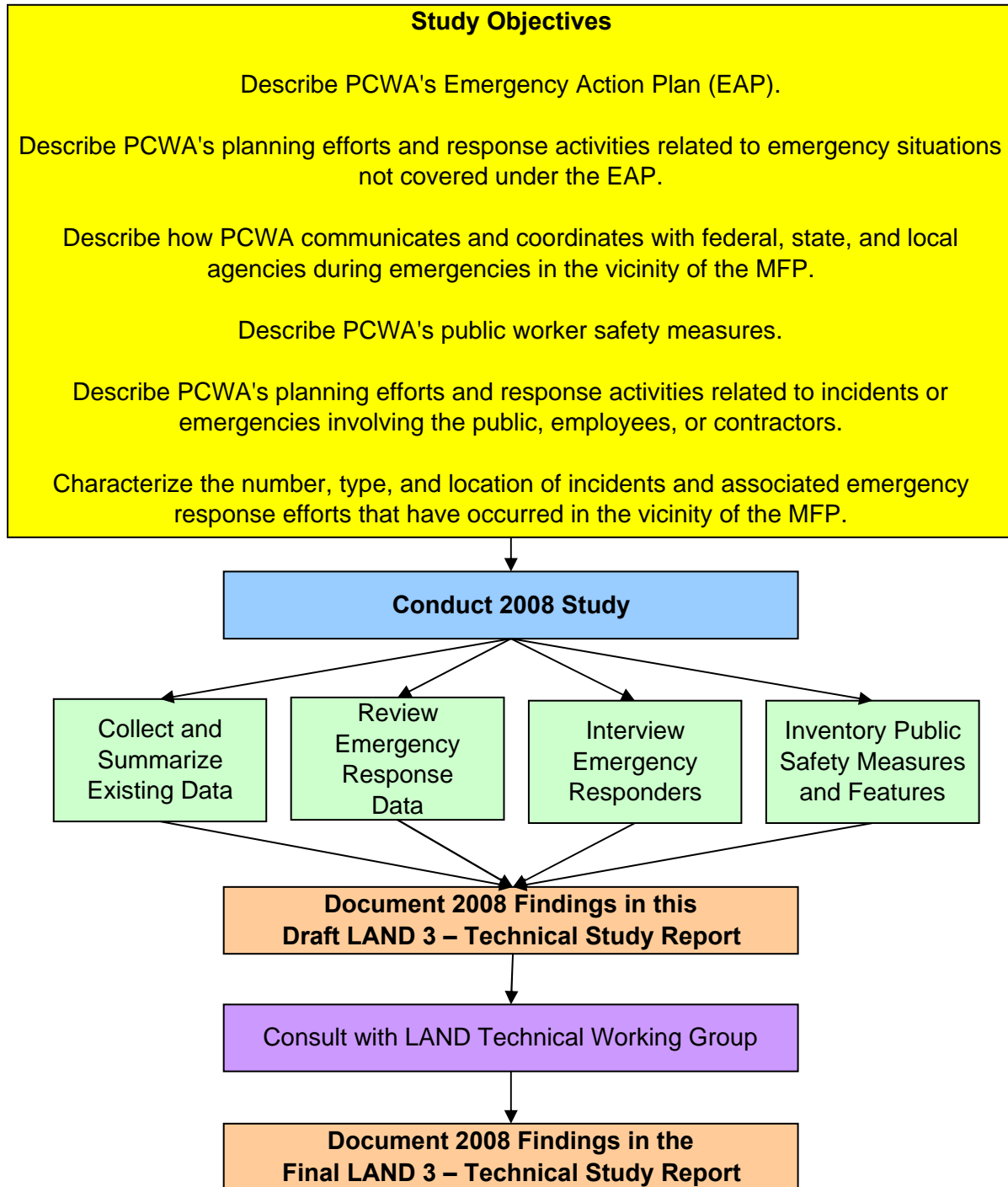
<sup>5</sup>Incidents were reported in the Grass Valley CAL FIRE dataset.

<sup>6</sup>California State Parks is not a primary responder to emergency incidents and the data do not reflect mutual aid that they may have provided.

<sup>7</sup>This emergency response dataset is identical to a subset of the data provided by the Camino CAL FIRE. These data are reported here.

**FIGURE**

**Figure LAND 3-1. LAND 3 – Emergency Action and Public Safety Objectives and Related Study Elements and Reports.**



**MAPS**

**APPENDIX A**  
**Emergency Action Plan Annual Training Invitation to**  
**Responsible Agencies and Organizations (2009)**



March 20, 2009

Subject: Middle Fork American River Hydroelectric Project – FERC Project No. 2079  
Invitation to the May 20, 2009 Emergency Action Plan (EAP) Training, Tabletop and  
Functional Exercises

Dear EAP Book Holder:

**Placer County Water Agency is requesting your participation in its Emergency Action Plan (EAP) Training, Tabletop and Functional Exercises scheduled for May 20, 2009.** We would appreciate receiving confirmation of your plans to attend. **Please respond at your earliest convenience and no later than April 10, 2009, by either returning via mail or by fax the attached Confirmation of Attendance.**

The program will begin with a check-in occurring between 8:30 – 9:00 AM at the following:

Hilton Garden Inn  
1951 Taylor Road  
Roseville, CA 95661  
Tel: (530) 773-7171

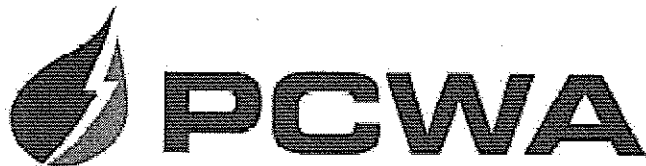
A map and driving directions are attached. The check-in period will allow guests to arrive in time to replace outdated sections of their EAP with updated ones, and to talk informally over a Continental Breakfast before the formal training and exercises begin at 9:00 AM. The day's events will include lunch and will end around 3:30 – 4:00 PM.

The agenda for the day will include sessions for accomplishing the following:

1. Reviewing sections of the EAP, including improvements suggested by participants at previous face to face meetings and the 2004 Functional Exercise to prepare ourselves for the Tabletop and Functional Exercises;
2. Enhancing our understanding of the potential flood effects;
3. Performing a Tabletop Exercise for L.L. Anderson Dam (French Meadows Reservoir), practicing in an informal setting our respective agency's responses as conditions could develop under the hypothetical flood;
4. Reinforcing our training concepts with a fun game involving all participants;
5. Performing a Functional Exercise for L.L. Anderson Dam (French Meadows Reservoir) practicing in a more realistic setting our respective agency's responses as conditions could develop under the hypothetical flood; and
6. Conducting a critique of the Tabletop and Functional Exercises, identifying any additional recommendations for improving the EAP and for conducting future exercises.

The Emergency Action Plan (EAP) is a living document, subject to continuous review and updating by PCWA, as circumstances warrant and comments are received from collaborating agencies such as yours. The Tabletop and Functional Exercises provides a unique opportunity for participants to achieve a broader understanding of the joint responses by PCWA and local agencies that would be integrated for such an emergency.

One of the important suggestions we heard from you during previous exercises was the need to better define the roles and responsibilities we all have under the EAP. In this regard, we have drafted these for your preview and comments. We would welcome any comments you may have ahead of the May 20, 2009 program, and encourage you to include those in your response confirming your attendance. PCWA



also welcomes your creative feedback during training and exercises in the interest of investigating ways to improve the EAPs in order for us to collectively provide the best protection of life and property.

Please call either Greg Young at (530) 823-4959 or Jay Correa at (530) 885-6917, if you have any further questions. We greatly appreciate your commitment of time and energy to support this critical step in emergency planning.

Sincerely,

Stephen J. Jones  
Power System Manager  
Placer County Water Agency

EAP Tabletop & Functional Exercise Invitation (3-20-09)

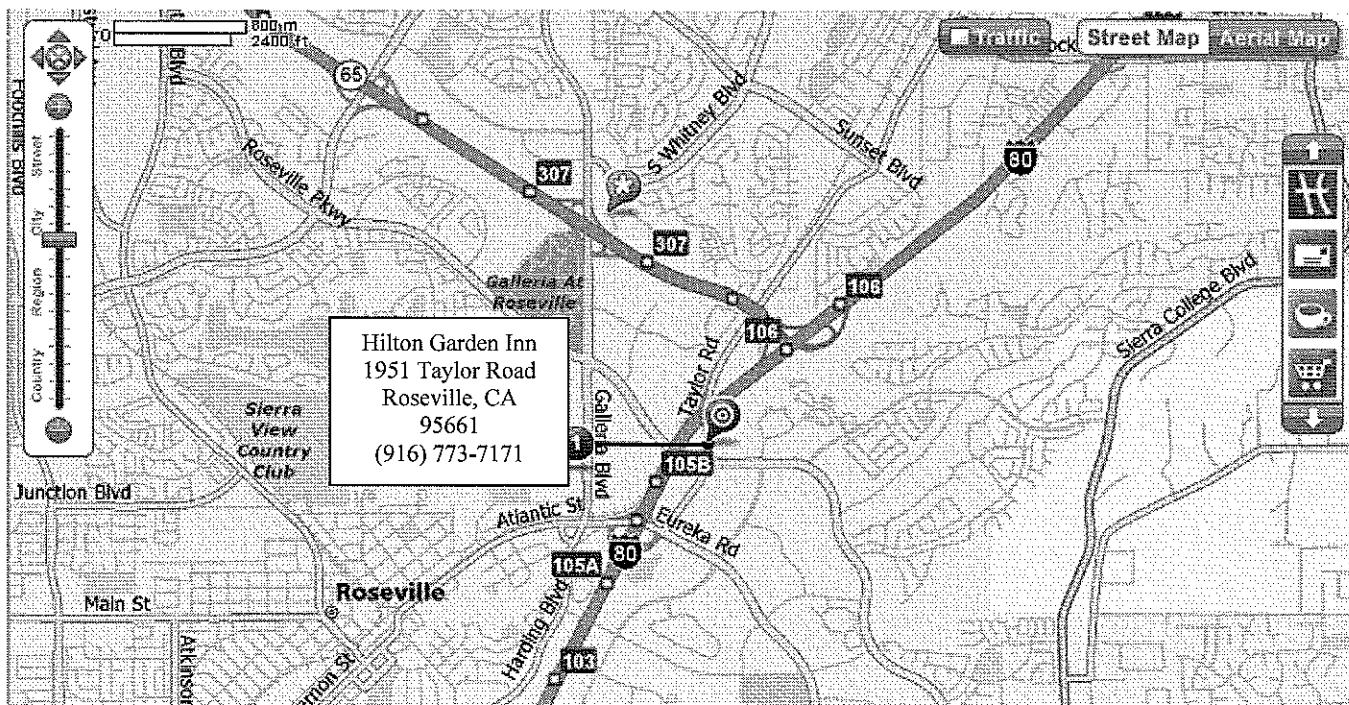
Enclosure

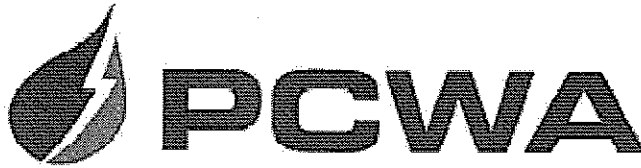
cc:

Andrew Price – Price Geographic Consulting, 2004 Adobe Trail, Placerville, CA 95667  
John Kessler – Kessler & Associates, LLC, 2801 Shady Lane, Pollock Pines, CA 95726

Driving Directions From Sacramento:

- Take I-80 East;
- Exit Eureka Road;
- Continue straight onto Taylor Road;
- Hotel is located on the left hand side at the intersection of Roseville Parkway;





**Confirmation of Attendance for the EAP Training, Tabletop & Functional Exercises  
May 20, 2009**

EAP Book #(s) \_\_\_\_\_

Name of Organization \_\_\_\_\_

Responder's Name \_\_\_\_\_ Responder's Phone # \_\_\_\_\_

Responder's Email \_\_\_\_\_

Our organization will attend the training, Tabletop and Functional Exercises and be represented by the following:

Names and titles of representatives who plan to attend:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Our suggestions for additional training topics are:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Our comments to the EAP Section V - Draft Roles and Responsibilities are:  
(you can attach a copy of your mark-up to our draft if this is easier)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mail to:  
Jay Correa  
Administrative Specialist  
Placer County Water Agency  
P.O. Box 667  
Foresthill, CA 95631

or

Fax to (530) 367-4440:  
Jay Correa  
Administrative Specialist  
Placer County Water Agency

# PCWA – Middle Fork American River Project (FERC # 2079) Draft Section V - Notification & Evacuation Responsibilities

*Dear Emergency Management Agency Representative:*

*Please review your respective responsibilities and provide any initial comments you may have as part of your confirmation of attendance in the May 20, 2009 EAP Tabletop and Functional Exercises to be held in Roseville. We will discuss these further at this program, but would greatly appreciate receiving your initial comments as part of your response/confirmation of attendance that we request you return by April 10, 2009.*

*Thank you,*

*The PCWA Team*

**Emergency Management System** - Applying the Incident Command System (ICS), a component of the Standardized Emergency Management System (SEMS)

## **Placer County OES Coordinator and Emergency Operations Center (EOC) –**

- Lead the Emergency Operations Center (EOC) and coordinate responses by county, state and federal agencies;
- Establish priorities, interagency cooperation and efficient flow of information and resources for protecting lives and property;
- Coordinate with NWS to provide warnings and bulletins of potential or actual flooding using the Emergency Alert System via TV and radio;
- Direct sheriff, fire, and transportation agencies for notification, assessment, evacuation, traffic control, road closure and monitoring activities;
- Notify and coordinate providing services with State OES Warning Center;

## **El Dorado County OES Coordinator and Sheriff's Department –**

- Notify and coordinate support from El Dorado County Department of Transportation, USFS, CalFire and CHP - Placerville in providing mutual aid to Placer County in the form of public notification/evacuation, traffic control and road closure under the direction of the EOC;
- Establish El Dorado County-wide priorities, interagency cooperation and efficient flow of information and resources for protecting lives and property;

- Participate in the EOC as managed by Placer County OES;
- Coordinate with NWS to provide warnings and bulletins of potential or actual flooding using the Emergency Alert System via TV and radio;
- Direct El Dorado County sheriff, fire, and transportation agencies for notification, assessment, evacuation, medical aid, traffic control, road closure and monitoring activities;
- Coordinate information and response with CHP – Placerville for traffic control, road closure and monitoring activities;
- Coordinate providing services with State OES;

**Incident Command Post (ICP) –**

- Serves as the command post for directing field activities, as supported by the EOC;
- Would most likely be led by Placer County Sheriff or the USFS;

**PCWA Operator or On-Call Operator –**

- Serve as the first responder to the dam.
- Assess condition of the dam and reservoir and determine what response is necessary for protection of life and property;
- Report to the Power System Manager, Senior Operator, Hydro Administration or Engineering any conditions that require action or implementation of the EAP;
- Carry out any operations of the powerhouse, outlet and spillway controls in coordination with PG&E's Drum Powerhouse Operations Center and downstream water and/or hydroelectric project operators including USBR;
- Provide on-site monitoring and security of the dam and reservoir, unless otherwise coordinated with local emergency service agencies;

**PCWA Power Systems Manager, Senior Operator, Administration or Engineering –**

- Direct field operations as necessary for support of assessing conditions;
- Determine appropriate classification of event;
- Make notifications or direct others to make notifications (per Sample Statements) as designated in the Notification Flowchart;
- Direct implementation of all measures available to reduce risk to life and property, including water releases from Hell Hole, LL. Anderson and Ralston Afterbay Dams;
- Make notifications or to direct others to make notifications as designated in the Notification Flowchart , including those to Placer County and El Dorado County Sheriff Dispatch Centers, PCWA Station Attendants at Hell Hole and the Campground Manager at French Meadows , and state and federal officials;
- To develop any engineering plans for corrective measures and monitoring in coordination with PCWA Power System Operations, DSOD and FERC;
- To determine the duration of the emergency, and only when danger to life and property has passed, terminating the EAP in coordination with the EOC, FERC and DSOD;
- To evaluate the response to the emergency and adequacy of the EAP with EMAs following an event, issuing a written report, and revising the EAP as necessary;

**PCWA General Manager's Office –**

- Support or serve as PCWA's Liaison in the EOC;
- Serve as the Public Information Officer for contact with the public and news media;

**PCWA's Hell Hole Station Attendants –**

- Monitor conditions and regulate flow releases from Hell Hole and LL Anderson Dams;
- Notify Hell Hole Dam recreationists, or LL Anderson Dam recreationists and French Meadows campground manager of hazards and provide directions for seeking safe ground;

**USFS's Campground Manager at French Meadows Reservoir –**

- Coordinate and relay information to recreationists and direct them to safe ground based on guidance from USFS, PCWA and the EOC;

### **PG&E's Drum Powerhouse Switching Center –**

- Perform remote monitoring of the Middle Fork American River project outside of business hours;
- Notify PCWA's Foresthill Office or On-Call Operator of any alarms or reports from the public;
- Notify PG&E's helicopter pilot in Auburn if needed for warning notifications or evacuations from the air to dispersed recreationists and miners;
- If PCWA can't be contacted, make notifications or direct others to make notifications as designated in the Notification Flowchart, including those to Placer County and El Dorado County Sheriff Dispatch Centers, PCWA Station Attendants at Hell Hole and the Campground Manager at French Meadows, and state and federal officials;

### **911 Emergency –**

- Placer County Sheriff receives notification from Placer County and or PCWA; El Dorado County Sheriff receives notification from either Placer County, PCWA or from El Dorado County;
- If PCWA has not yet been notified of a hazardous condition related to Hell Hole, L.L. Anderson or Ralston Afterbay Dams, notify PCWA or PG&E's Drum Powerhouse;
- Notify other federal, state and county EMAs and relay information updates according to Notification Flowchart;

### **Placer County Sheriff –**

- Provide primary field direction and support in conducting assessment, warnings or evacuations of the public, notification of Foresthill Fire Protection District, establishing traffic controls, barricading roads, or monitoring flood conditions to protect recreationists, residents and businesses;

### **El Dorado County Sheriff –**

- Provide primary field direction and support in conducting assessment, warnings or evacuations of the public, establishing traffic controls, barricading roads, or monitoring flood conditions to protect recreationists, residents and businesses;

**CalFire (Grass Valley) –**

- Notify personnel internal to CalFire to provide notification and evacuation services, and medical aid;

**CalFire (Camino) –**

- Notify personnel internal to CalFire and El Dorado County Fire Protection District to provide notification and evacuation services, and medical aid;

**USFS (Grass Valley Dispatch and Tahoe National Forest –**

- Notify personnel internal to USFS to provide notification and evacuation services to dispersed recreationists, and traffic controls/road closures on USFS roads within Tahoe National Forest;
- Notify French Meadows campground manager if emergency is related to LL Anderson Dam;

**USFS (Camino Dispatch and El Dorado National Forest) –**

- Notify personnel internal to USFS to provide notification and evacuation services to dispersed recreationists, and traffic controls/road closures on USFS roads within El Dorado National Forest;

**State Department of Parks and Recreation –**

- Provide field support in conducting warnings or evacuations of the public, barricading roads or monitoring flood conditions. State Park's support is to particularly protect recreationists along the North and Middle Forks of the American River in and near Auburn State Recreation Area;
- Notify California Outdoors Rafting Association of the need to clear boaters off of the river;

**Highway Patrol –**

- Monitor traffic safety and highway road conditions;
- Implement road closure if necessary;

Provide notification via intercom and support monitoring conditions through its Air Operations;

**CalTrans –**

- Monitor traffic safety and state road conditions;
- Implement traffic control and road closures if necessary;

**Placer County Department of Public Works –**

- Monitor traffic safety and county road conditions;
- Implement traffic control and road closures if necessary;

**Placer County Public Information Officer –**

- In coordination with the EOC, provide information and updates to the public and news media regarding flood status and directions for warning and evacuation;

**Placer County Flood Control District –**

- Coordinate notifications and warnings on local flood effects as attributable to flooding caused by the Middle Fork American River Project;

**California Outdoors Rafting Association –**

- Notify whitewater boating businesses of potential and developing hazards and advise to avoid travel into the North and Middle Forks of the American River if conditions are not safe;

**USBR and DWR Flood Operations Center –**

- Manage high inflows to Folsom Lake in consideration of lake level and potential spill releases;
- Notify boaters and other potentially affected recreationists to evacuate the North and Middle Fork American River inlets to Folsom Reservoir;
- Provide information regarding field conditions and coordinate with EMAs and the EOC for notification and evacuation;

**State Division of Safety of Dams (DSOD) –**

- Provide technical guidance in assessing dam safety issues & implementing corrective actions;

**Federal Energy Regulatory Commission (FERC) –**

- Support and serve as a partner in PCWA’s emergency preparedness and coordination with other agencies in developing and implementing the EAP;
- Provide technical guidance in assessing dam safety issues & implementing corrective actions;
- Coordinate information to and from FERC’s Washington D.C. office;

**State OES Warning Center –**

- Support PCWA’s emergency preparedness and coordination with other agencies in developing and implementing the EAP;
- Provide a 24-7 point of contact with the State for coordinating assistance from statewide resources to the local community, such as emergency power, shelter & staging areas, potable water and mutual aid;
- Support Local Emergency Proclamations to enable & expedite actions for protection of life and property, restoration of public facilities & requests for a Governor’s State of Emergency and/or President’s Declaration when applicable;
- Coordinate state funding for disaster relief, including when applicable coordination for federal funding with FEMA;

**National Weather Service –**

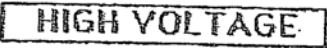
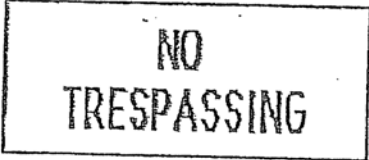
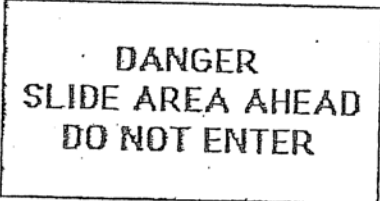
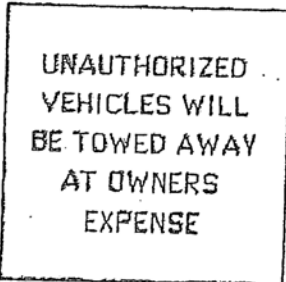
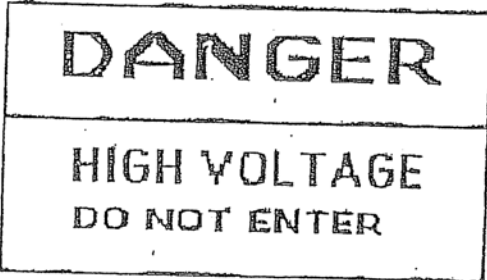
- Continuously (24-7) monitor atmospheric & storm conditions and advise public, emergency services and PCWA of forecasted weather events via text, personal communications and site-specific maps;
- Provide public warning and bulletins via TV and radio of potential or actual flooding using the Emergency Alert System (EAS);

**APPENDIX B**  
**Types of Safety Signs in the Vicinity of the MFP**

Appendix B. Types of Safety Signs in the MFP.<sup>1</sup>

	<p>SIZE(IN.) SIGN 36X60 LETTERS 6 TYPE: METAL</p>	<p>COLOR GREEN WHITE</p>
	<p>SIZE(IN.) SIGN 7X14 LETTERS 1.5 1.0 TYPE: METAL</p>	<p>COLOR WHITE ORANGE ORANGE</p>
	<p>SIZE(IN.) SIGN 14X20 LETTERS 3.0 1.5 1.0 0.625 TYPE: METAL</p>	<p>COLOR YELLOW BLACK BLACK BLACK BLACK</p>
	<p>SIZE(IN.) SIGN 19X25 LETTERS 2.0 1.5 TYPE: METAL</p>	<p>COLOR YEL/BRN BLACK WHITE</p>
	<p>SIZE(IN.) SIGN 12X16 LETTERS 1.75 1.5 TYPE: ADHESIVE</p>	<p>COLOR RED/WHITE WHITE BLACK</p>

Appendix B. Types of Safety Signs in the MFP (continued).<sup>1</sup>

	<p>SIGN SIZE(IN.)            4X24            LETTERS 2.5            TYPE: METAL</p>	<p>COLOR            GREEN            WHITE</p>
	<p>SIGN SIZE(IN.)            7X10            LETTERS 2            TYPE: METAL</p>	<p>COLOR            BLACK            WHITE</p>
	<p>SIGN SIZE(IN.)            18X36            LETTERS 3            TYPE: WOOD</p>	<p>COLOR            BROWN            RED</p>
	<p>SIGN SIZE(IN.)            18X18            LETTERS 2            TYPE: METAL</p>	<p>COLOR            WHITE            BLACK</p>
	<p>SIGN SIZE(IN.)            10X14            LETTERS 2(DAN)                      3(HIGH)            TYPE: PLASTIC</p>	<p>COLOR            RD\BLK\WH            WHITE            BLACK</p>
<p>NOTE: DANGER PORTION OF SIGN ON RED ELLIPSE.</p>		

Appendix B. Types of Safety Signs in the MFP (continued).<sup>1</sup>

<p style="text-align: center;"><b>HELL HOLE SUBSTATION</b></p> <p style="text-align: center;">PLACER COUNTY WATER AGENCY POWER SYSTEMS DIVISION</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN        7X10        WHITE LETTERS            RED</p> <p>TYPE: METAL</p>
<p style="text-align: center;"><b>CAUTION</b></p> <p style="text-align: center;">NO SMOKING TURN OFF MOTOR AND RADIO FUEL NOZZLE MUST BE HAND HELD AND MANUALLY HELD OPEN</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN        14X20        BLK/YEL LETTERS        3            YELLOW                   1.5        BLACK                   1            BLACK</p> <p>TYPE: ADHESIVE</p>
<p style="text-align: center;"><b>CAUTION</b></p> <p style="text-align: center;">RED LIGHT INDICATES CO<sub>2</sub> DISCHARGE VENTILATE AND TEST FOR OXYGEN DEFICIENCY BEFORE ENTERING</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN        7X10        BLK/YEL LETTERS        1.625        YELLOW                   0.5        BLACK</p> <p>TYPE: ADHESIVE</p>
<p style="text-align: center;"><b>STREAMFLOW MEASURING STATION</b></p> <p style="text-align: center;">U.S. GEOLOGICAL SURVEY IN COOPERATION WITH CALIFORNIA DEPARTMENT OF WATER RESOURCES</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN        8.5X11        YELLOW LETTERS        1            BLACK                   0.75        BLACK                   0.5        BLACK</p> <p>TYPE: METAL</p>
<p style="text-align: center;"><b>AUTHORIZED VEHICLES ONLY</b></p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN        18X24        WHITE LETTERS        4            RED</p> <p>TYPE: METAL</p>

Appendix B. Types of Safety Signs in the MFP (continued).<sup>1</sup>

<p style="text-align: center;"><b>HELL HOLE POWER HOUSE</b></p> <p style="text-align: center;">PLACER COUNTY WATER AGENCY POWER SYSTEMS DIVISION</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN    7X10    WHITE LETTERS       RED               RED</p> <p>TYPE: METAL</p>
<p style="text-align: center;"><b>WARNING</b></p> <p style="text-align: center;">THIS ROAD IS STEEP CROOKED AND HAZARDOUS <i>NO TRAILERS OR BOATING PERMITTED</i> NO OVERNIGHT CAMPING PERMISSION TO PASS REVOCABLE AT ANY TIME</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN    36X48    BLUE LETTERS    6    RED               3    WHITE               3    RED</p> <p>TYPE: METAL</p>
<p style="text-align: center;"><b>NO TRESPASSING</b></p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN    4X24    BLUE LETTERS 2.5    WHITE</p> <p>TYPE: METAL</p>
<p style="text-align: center;"><b>CAUTION</b></p> <hr/> <p style="text-align: center;">CUT OUT CO<sub>2</sub> SYSTEM BEFORE WORKING INSIDE</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN    10X14    BLK/YEL LETTERS 2.25    YELLOW               1    BLACK</p> <p>TYPE: ADHESIVE</p>
<p style="text-align: center;"><b>CAUTION</b></p> <hr/> <p style="text-align: center;">HEARING PROTECTION REQUIRED IN THIS AREA</p>	<p style="text-align: right;">SIZE(IN.)    COLOR SIGN    10X14    BLK/YEL LETTERS 2.25    YELLOW               1    BLACK</p> <p>TYPE: ADHESIVE</p>

Appendix B. Types of Safety Signs in the MFP (continued).<sup>1</sup>

WELCOME TO FRENCH MEADOWS RESERVOIR RECREATION AREA  
 RECREATION FACILITIES ARE WITHIN THE MIDDLE FORK AMERICAN RIVER PROJECT  
 OWNED BY PLACER COUNTY WATER AGENCY UNDER FEDERAL ENERGY REGULATORY  
 COMMISSION LICENSE No. 2079. RECREATION FACILITIES ARE OWNED  
 OPERATED AND MAINTAINED BY THE U.S. FOREST SERVICE  
 FOR FURTHER RECREATION INFORMATION PLEASE CONTACT  
 UNITED STATES FOREST SERVICE, FORESTHILL RANGER STATION, FORESTHILL CA.  
 OR PLACER COUNTY WATER AGENCY, FORESTHILL CA.  
 ALL FACILITIES ARE OPEN TO THE PUBLIC WITHOUT DISCRIMINATION

	SIZE(IN.)	COLOR
SIGN	20X36	WHITE
LETTERS	2	BLACK
	1	BLACK

TYPE: METAL

WELCOME TO HELL HOLE RESERVOIR RECREATION AREA  
 RECREATION FACILITIES ARE WITHIN THE MIDDLE FORK AMERICAN RIVER PROJECT  
 OWNED BY PLACER COUNTY WATER AGENCY UNDER FEDERAL ENERGY REGULATORY  
 COMMISSION LICENSE No. 2079. RECREATION FACILITIES ARE OWNED  
 OPERATED AND MAINTAINED BY THE U.S. FOREST SERVICE  
 FOR FURTHER RECREATION INFORMATION PLEASE CONTACT  
 UNITED STATES FOREST SERVICE, GEORGETOWN RANGER STATION, GEORGETOWN CA.  
 OR PLACER COUNTY WATER AGENCY, FORESTHILL CA.  
 ALL FACILITIES ARE OPEN TO THE PUBLIC WITHOUT DISCRIMINATION

	SIZE(IN.)	COLOR
SIGN	20X36	WHITE
LETTERS	2	BLACK
	1	BLACK

TYPE: METAL

<sup>1</sup>List of signs from PCWA's February 22, 1993 letter to FERC

## **APPENDIX C**

### **Photographs of Public Safety Signs at Project Facilities, Developed Project Recreation Facilities, Dispersed Concentrated Use Areas, and the Bypass and Peaking Reaches**

The following are examples of the types and quality of public safety signs in the MFP.



Photo 1. Sign is located on the gate on Hell Hole Dam and Powerhouse Road.

Sign is in fair Condition (bullet holes).



Photo 2. Sign is located on the gate on Hell Hole Dam and Powerhouse Road.

Sign is in poor condition (bullet holes).



Photo 3. Sign is located on gate on Hell Hole Dam and Powerhouse Road.

Sign is in poor condition (bullet holes).



Photo 4. Sign is located on the Hell Hole Powerhouse on the wall above the front entrance.

Sign is in good condition.



Photo 5. Sign is on the gate leading into tunnel at the back of Hell Hole Powerhouse.

Sign is in good condition.



Photo 6. Sign is located on the front of the gate to Hell Hole – Middle Fork Tunnel Gatehouse Road.

Sign is in good condition.



Photo 7. Sign is on the gate in front of the driveway to the Operator Cottages.

Sign is in good condition.



Photo 8. Sign is located near the fence by the trail leading to the Hell Hole Boat Ramp.

Sign is in good condition.

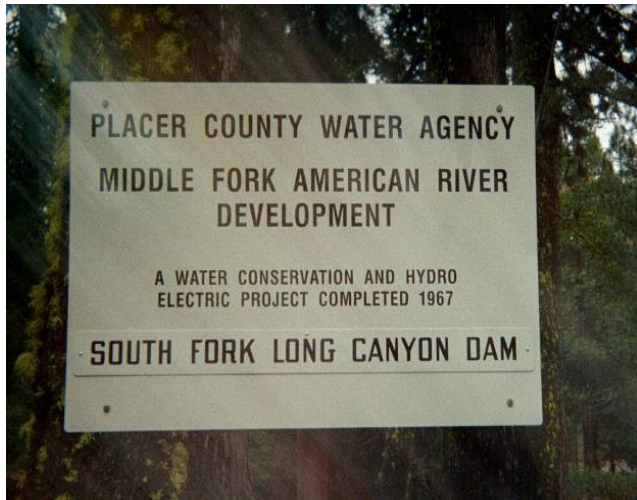


Photo 9. Sign is located on the South Fork Long Canyon Diversion and Drop Inlet Road leading to the South Fork Long Canyon Diversion Dam.

Sign is in good condition.



Photo 10. Sign is on the side of the gaging station at the North Fork Long Canyon Creek Diversion Dam (east side of river).

Sign is in poor condition.



Photo 11. Sign is on the side of gaging station at the North Fork Long Canyon Creek Diversion Dam (east side of river).

Sign is in poor condition.



Photo 12. Sign is located at the north area of lot at the French Meadows – Hell Hole Tunnel Gatehouse.

Sign is in poor condition (post in good condition, sign is bent).



Photo 13. Sign is located on the radio communications pole near the Radio Communications Tower near French Meadows – Hell Hole Tunnel Powerhouse.

Sign is in good condition.



Photo 14. Sign is located on the north access gate of French Meadows Spillway flood gates control platform.

Sign is in poor condition (faded).



Photo 15. Sign is located at a FR96 turnout near the French Meadows Dam Generator Building.

Sign is in fair condition (flaking paint and bullet holes)



Photo 16. Sign is located at the Duncan Creek – Middle Fork Tunnel Portal.

Sign is in good condition.



Photo 17. Sign is on the door of gaging station building at the Middle Fork American River Gage and Weir below French Meadows Dam.

Sign is in good condition.



Photo 18. Sign is on the sides of the gage trolley at the Duncan Creek Gage and Weir above Diversion Dam.

Sign is in fair condition.



Photo 19. Sign is located on the faceplate of generator at Duncan Creek – Middle Fork Tunnel controls platform.

Sign is in good condition.



Photo 20. Sign is located on the electrical box on a power pole near Middle Fork Powerhouse Butterfly Valve House.

Sign is in good condition.



Photo 21. Sign is located on Middle Fork Powerhouse Penstock and Butterfly Valve House Road.

Sign is in fair condition (peeling paint).



Photo 22. Sign is located at the main access gate and fence to the Middle Fork Powerhouse Upper Switchyard.

Sign is fair condition (bullet holes).



Photo 23. Sign is located on the perimeter fence (north of main gate) at Middle Fork Powerhouse Lower Switchyard.

Sign is in good condition.



Photo 24. Sign is located at northeast end of Middle Fork Interbay Dam at the top of each access gate of the floodgates control platform.

Sign is in fair condition.

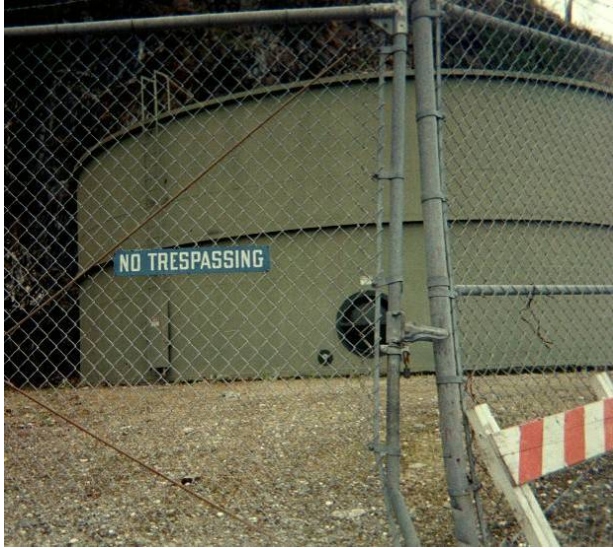


Photo 25. Sign is located on road-side (FR23) perimeter fence of the Middle Fork – Ralston Tunnel Surge Tank Storage Building.

Sign is in good condition.



Photo 26. Sign is located at Ralston Powerhouse and Switchyard.

Sign is in good condition.



Photo 27. Sign is located on the stream side of Ralston Powerhouse.

Sign is in good condition.



Photo 28. Sign is located on the Ralston Powerhouse perimeter fence.

Sign is in good condition.



Photo 29. Sign is located inside of Ralston Powerhouse perimeter fence.

Sign is in good condition.



Photo 30. Sign is located on the door on east side of Ralston Afterbay Dam Generator Building.

Sign is in good condition.



Photo 31. Sign is located on the railing around Ralston – Oxbow Tunnel Intake.

Sign is in good condition.



Photo 32. Signs are located on Drivers Flat Road before the gate.

Upper sign is in poor condition (bullet holes); lower sign is in good condition.



Photo 33. Signs are located on Drivers Flat Road before the gate.

Signs are in good condition.

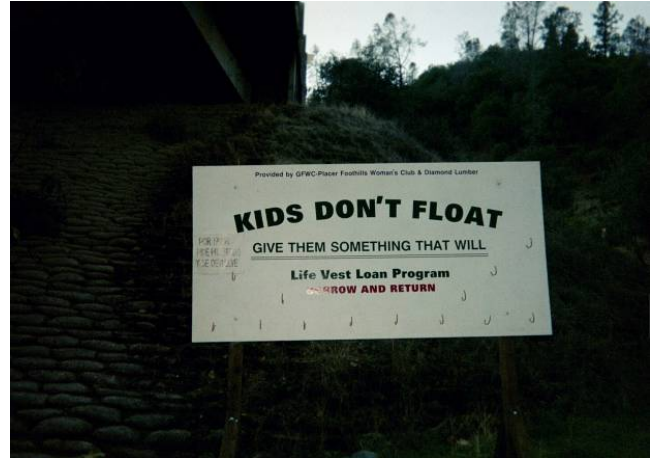


Photo 34. Sign is located under the bridge at the beach area at the confluence of the North Fork of the Middle Fork American River and the Middle Fork American River.

Sign is in good condition.

**APPENDIX D**

**Photographs of Buoys and Log Booms Associated with the MFP**



HHD1 – Log boom across spillway at Hell Hole Reservoir.



FMD1 – Log boom across spillway at French Meadows Reservoir.



MFID1 – Log boom across spillway at Middle Fork Interbay.



RAD1 – Log boom across spillway at Ralston Afterbay



DDD1 – Log boom across spillway at Duncan Creek Diversion Pool.



MC1 – Buoys across the beach at McGuire Campground.

**APPENDIX E**  
**Emergency Incident Response Summary Tables**

**TABLE OF CONTENTS**

---

**Tables**

- Table E-1. 2006 and 2007 Emergency Incident Responses in the Vicinity of the MFP, at a Project Facility, or in the Vicinity of the Peaking Reach Provided by the Foresthill Fire Protection District.
- Table E-2. Summary of 2006 and 2007 USDA-FS Eldorado National Forest Emergency Incident Responses at MFP Facilities, in the Vicinity of the MFP, or in the Vicinity of the Peaking Reach.
- Table E-3. Summary of 2006 and 2007 USDA-FS Eldorado National Forest Emergency Incident Responses.
- Table E-4. Summary of 2006 and 2007 USDA-FS Tahoe National Forest Emergency Incident Responses at MFP Facilities, in the Vicinity of the MFP, or in the Vicinity of the Peaking Reach.
- Table E-5. Summary of 2006 and 2007 USDA-FS Tahoe National Forest Emergency Incident Responses.
- Table E-6. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses at MFP Facilities.
- Table E-7. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses in the Vicinity of the MFP.
- Table E-8. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses in the Vicinity of the Peaking Reach.
- Table E-9. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses.
- Table E-10. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses in the Vicinity of the Peaking Reach.
- Table E-11. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses.
- Table E-12. Summary of 2006 and 2007 Camino CAL FIRE Emergency Responses in the Vicinity of the Peaking Reach.
- Table E-13. Summary of 2006 and 2007 Incidents Identified by ASRA as Occurring in the Vicinity of the Peaking Reach.

**Maps**

- Map E-1. Placer County Sheriff's Department Service Areas in the General Vicinity of the MFP.

**TABLES**

**Table E-1. 2006 and 2007 Emergency Incident Responses in the Vicinity of the MFP, at a Project Facility, or in the Vicinity of the Peaking Reach Provided by the Foresthill Fire Protection District.**

Incident Number <sup>1</sup>	Date	Time	Location	Incident Type	In Project Vicinity <sup>2</sup>	At Project Facility	In the Vicinity of the Peaking Reach
<b>2006</b>							
0000325 - 000	7/16/2006	13:37	On Mosquito Ridge Rd at Oxbow Reservoir (Ralston Afterbay)	553 - Public service	No	Yes	No
<b>2007</b>							
0000407 - 000	7/29/2007	0:46	Middle Fork of the American River approximately 2.5 mi up	356 - High angle rescue	No	No	Yes
0000629 - 000	12/21/2007	14:26	Approx. 2 miles down Ruck Chuck access road	141 - Forest, woods or wildland fire	No	No	Yes

<sup>1</sup>A total of 602 and 641 responses in 2006 and 2007 were provided to PCWA. Incidents that occurred in residential/ developed areas are not included in this table.

<sup>2</sup>Refer to the approach section in the text for a description of incidents that occurred in the Project vicinity.

**Table E-2. Summary of 2006 and 2007 USDA-FS Eldorado National Forest Emergency Incident Responses at MFP Facilities, in the Vicinity of the MFP, or in the Vicinity of the Peaking Reach.**

Year	Location <sup>1,2,3</sup>		Incident Type					Total
			Fire - Wildland	Law Enforcement	Miscellaneous	Referral to Other Agency	Search and Rescue	
<b>In the Vicinity of the Project<sup>4</sup></b>								
2006	Hell Hole Area	14N09C / Boundary Road		3				3
		Hell Hole USDA Station		2			1	3
	<b>Total</b>		<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>
2007	Long Canyon Area	FR2 near 14N16		1				1
	Hell Hole Area	Hell Hole USDA Station		5	1	1		7
		Hell Hole Picnic Area/ Soda Springs Road		1				1
	<b>Total</b>		<b>0</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>9</b>
<b>Total (2006 and 2007)</b>			<b>0</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>15</b>
<b>At a Project Facility</b>								
2006	Hell Hole Area	Big Meadows Campground		4				4
		Hell Hole Boat Ramp		5		1		6
		Hell Hole Campground		7				7
		Hell Hole Dam		2				2
	Long Canyon Area	Middle Meadows Group Campground		3				3
	Ralston Afterbay Area	Oxbow Reservoir (Ralston Afterbay)	1					1
	<b>Total</b>		<b>1</b>	<b>21</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>23</b>
2007	Hell Hole Area	Big Meadows Campground		1				1
		Hell Hole Boat Ramp		4				4
		Hell Hole Campground		4				4
		Hell Hole Dam	1	2		1		4
	Long Canyon Area	Middle Meadows Group Campground		6				6
	<b>Total</b>		<b>1</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>19</b>
<b>Total (2006 and 2007)</b>			<b>2</b>	<b>38</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>42</b>
<b>In the Vicinity of the Peaking Reach</b>								
No incidents occurred in the vicinity of the peaking reach.								

<sup>1</sup>A total of 58 and 55 incidents for 2006 and 2007, respectively were provided to PCWA. Four incidents were removed prior to analyses for which incident numbers, date, and times were not included in the dataset.

<sup>2</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>3</sup>This emergency response dataset is identical to a subset of the data provided by the Camino CAL FIRE. These data are reported here. The other Camino CAL FIRE data are summarized in Table E-12.

<sup>4</sup>Refer to the approach section in the text for a description of incidents that occurred in the Project vicinity.

**Table E-3. Summary of 2006 and 2007 USDA-FS Eldorado National Forest Emergency Incident Responses.**

Year	Location <sup>1</sup>		Incident Type								Total	
			Fire					Law Enforcement	Miscellaneous	Referral to Other Agency		Search and Rescue
			Fire - Control Burn	Fire - False Alarm	Fire - Illegal Control Burns	Fire - Smoke Check	Fire - Wildland					
2006	Hell Hole Area	14N09C / Boundary Road						3				3
		Big Meadows Campground			1			4				5
		Hell Hole Boat Ramp						5		1		6
		Hell Hole Campground						7				7
		Hell Hole Dam						2				2
		Hell Hole USDA Station						2			1	3
	Long Canyon Area	Ramsey Crossing						1				1
		Middle Meadows Group Campground						3				3
	Ralston Afterbay Area	Oxbow Reservoir (Ralston Afterbay)					1					1
	Ralston Ridge Area	Ralston Ridge/ Blacksmith Flat			1			2				3
	Other	Southeast of Hell Hole Reservoir near McKinstry Peak								1		1
		Blacksmith Flat			1			1	1			3
		Buckeye Flat						1				1
		Bunker Hill Lookout					1	2				3
		Ellicott Bridge						15				15
		Little Mountain Meadow						1				1
	<b>Total</b>		<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>49</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>58</b>
2007	Hell Hole Area	Big Meadows Campground						1				1
		FR2 near 14N16						1				1
		General area of Rubicon River RM 6.5 - 7.7				1						1
		Hell Hole Boat Ramp						4				4
		Hell Hole Campground						4				4
		Hell Hole Dam					1	2		1		4
		Hell Hole Picnic Area/ Soda Springs Road						1				1
		Hell Hole USDA Station						5	1	1		7
	Long Canyon Area	General area of French Meadows Powerhouse					1					1
		Middle Meadows Group Campground						6				6
	Other	Northeast of Loon Lake									1	1
		=B(LO BALD MOUNTAIN					1					1
		=D(10_T13N_R13E_M)			1							1
		Bunker Hill Lookout	2									2
		Devil Peak (Georgetown Road)				1						1
		Ellicott Bridge						13				13
		14N08C / Eleven Pines Road						2				2
Pennsylvania Point						1					1	
Ramsey Crossing/ 13N01Y							1				1	
Ridge Northwest of Hell Hole Reservoir and East of Rd. 14N09							1				1	
Rubicon River & Long Canyon Creek (approx lat of NF/SF confluence)						1				1		
<b>Total</b>		<b>2</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>40</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>55</b>	
<b>Total 2006 and 2007</b>		<b>2</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>89</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>113</b>	

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported. Four incidents were removed prior to analyses for which incident numbers, date, and times were not included in the dataset.

**Table E-4. Summary of 2006 and 2007 USDA-FS Tahoe National Forest Emergency Incident Responses at MFP Facilities, in the Vicinity of the MFP, or in the Vicinity of the Peaking Reach.**

Year	Location <sup>1,2</sup>		Incident Type <sup>4</sup>					Total
			Fire	Law Enforcement	Public Assist	Radio Tech	Engineering	
<b>In the Vicinity of the Project<sup>3</sup></b>								
2006	French Meadows Area	French Meadows Area		2	1			3
	<b>Total</b>		<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>
2007	French Meadows Area	Admin Site		1				1
		French Meadows Area		4	1			5
	<b>Total</b>		<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>
<b>Total (2006 and 2007)</b>			<b>0</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
<b>At a Project Facility</b>								
2006	French Meadows Area	Ahart Campground	1					1
		Coyote Campground		1				1
		French Meadows Campground		1	3			4
		French Meadows Dam			2			2
		Lewis Campground	1	1				2
	Middle Fork Interbay Area	Middle Fork Interbay		1				1
	Ralston - Oxbow Area	Near Ralston Powerhouse	1					1
		Oxbow ( <i>Ralston Afterbay</i> <sup>5</sup> )		2				2
		Oxbow/Ralston on ENF ( <i>Ralston Afterbay</i> <sup>5</sup> )	1					1
		Ralston ( <i>Ralston Afterbay</i> <sup>5</sup> )		2				2
		Ralston Day Use/ Campground ( <i>Ralston Picnic Area</i> <sup>5</sup> )		1			1	2
		Ralston Powerhouse				1		1
	<b>Total</b>		<b>4</b>	<b>9</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>20</b>
2007	French Meadows Area	Ahart Campground	1	2				3
		French Meadows Boat Ramp			1			1
		French Meadows Campground	1	1	2			4
		Lewis Campground		1				1
		McGuire Campground Area ( <i>McGuire Picnic Area or Poppy Campground</i> <sup>5</sup> )		1				1
	<b>Total</b>		<b>2</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>10</b>
<b>Total (2006 and 2007)</b>			<b>6</b>	<b>14</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>31</b>
<b>In the Vicinity of the Peaking Reach</b>								
2007		Middle Fork American River Horseshoe Bar	1					1

<sup>1</sup>A total of 45 and 26 incidents for 2006 and 2007, respectively were provided to PCWA.

<sup>2</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>3</sup> Refer to the approach section in the text for a description of incidents that occurred in the Project vicinity.

<sup>4</sup>Public assistance incidents included assistance provided to a motorist and information to a concessionaire. Law enforcement incidents included refusal to pay fees at campgrounds and illegal OHV operation.

<sup>5</sup>Reported incident location is assumed to be project facility in italics.

**Table E-5. Summary of 2006 and 2007 USDA-FS Tahoe National Forest Emergency Incident Responses.**

Year	Location <sup>1</sup>		Incident Type								Total		
			Accident	Medical Aid	Fire	Law Enforcement	Public Assistance			Rockslide		Engineering	
							Public Assist	Public Hazard	Radio Tech				
2006	French Meadows Area	Ahart Campground			1							1	
		Coyote Campground				1						1	
		French Meadows Area				2	1					3	
		French Meadows Campground				1	3					4	
		French Meadows Dam					2					2	
		Lewis Campground			1	1						2	
	Duncan Creek Area	Duncan Creek on 96 Road				1		1				2	
		Duncan Diversion Hunters Camp			1							1	
	Middle Fork Interbay Area	Middle Fork Interbay				1						1	
		Middle Fork Interbay and 96 Road				1						1	
	Ralston - Oxbow Area	Near Ralston Powerhouse			1							1	
		Oxbow ( <i>Ralston Afterbay</i> <sup>2</sup> )				2						2	
		Oxbow/Ralston on ENF ( <i>Ralston Afterbay</i> <sup>2</sup> )			1							1	
		Ralston ( <i>Ralston Afterbay</i> <sup>2</sup> )				2						2	
		Ralston Day Use/ Campground ( <i>Ralston Picnic Area</i> <sup>2</sup> )				1					1	2	
		Ralston Powerhouse							1			1	
	Other	96 Road				11				2	1	14	
		96 Road at Skunk Canyon				1						1	
		<b>Total</b>		<b>0</b>	<b>0</b>	<b>5</b>	<b>25</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>42</b>
	2007	French Meadows Area	Admin Site				1						1
Ahart Campground					1	2						3	
French Meadows Area						4	1					5	
French Meadows Boat Ramp							1					1	
French Meadows Campground					1	1	2					4	
Lewis Campground						1						1	
McGuire Campground Area ( <i>McGuire Picnic Area</i> or <i>Poppy Campground</i> <sup>5</sup> )						1						1	
In the Vicinity of the Peaking Reach		Middle Fork American River Horseshoe Bar			1							1	
Other		96 Road	3	1	1	1				1	2	9	
		<b>Total</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>26</b>	
<b>Total (2006 and 2007)</b>			<b>3</b>	<b>1</b>	<b>11</b>	<b>37</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>68</b>	

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>2</sup>Reported incident location is assumed to be project facility in italics.

**Table E-6. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses at MFP Facilities.**

Year	Location <sup>2</sup>		Incident Type				Public/ Agency Assistance/ Service		Total
			Law Enforcement				Agency Assist	Any Type Assist	
			Extra Patrol	Foot Patrol	Grand Theft	Trespassing			
2006	French Meadows Reservoir Area	French Meadows Campground					1	1	
		French Meadows Reservoir			2			2	
	Ralston Afterbay Area	Ralston Afterbay				1		1	
	<b>Total</b>		<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>
2007	French Meadows Reservoir Area	French Meadows Campground		1			1		2
		French Meadows Dam	1						1
	<b>Total</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>
<b>Total (2006 and 2007)</b>			<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>

<sup>1</sup>A total of 4,743 and 5,438 incidents for 2006 and 2007, respectively were provided to PCWA.

<sup>2</sup>Blank boxes indicate that no emergency response incidents were reported.

**Table E-7. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses in the Vicinity of the MFP.**

Year	Location <sup>2,3</sup>	Incident Type <sup>1</sup>													Total
		Search and Rescue			Law Enforcement						Public/ Agency Assistance/ Service			Other	
		Missing Juvenile	Search and Rescue	Missing Person	Area Check	Boat Activity	Burglary	Extra Patrol	Promis Shots	Welfare Check	Agency Assist	Airops Call	Law Information	Incomplete 911 Call	
2006	French Meadows Reservoir Area			2				1			1		1		5
	Hell Hole Ranger Station	1				1					1			1	4
	<b>Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>9</b>
2007	French Meadows Reservoir Area			1				1	1	1			1		5
	Talbot Campground		1												1
	Long Canyon Dispersed Campground									1					1
	Hell Hole Ranger Station				1		1			1		2	1	1	7
	<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>14</b>
<b>Total (2006 and 2007)</b>		<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>23</b>

<sup>1</sup>A total of 4,743 and 5,438 incidents for 2006 and 2007, respectively were provided to PCWA.

<sup>2</sup>Blank boxes indicate that no emergency response incidents were reported.

<sup>3</sup>Refer to the approach section in the text for a description of incidents that occurred in the Project vicinity.







Table E-9. Summary of 2006 and 2007 Placer County Sheriff's Department Emergency Incident Responses.

Year	Location	Incident Type <sup>1</sup>																	Total							
		Law Enforcement														Fire		Other								
		SWAT/ Set Calls	Threats Report	Throw Items from Vehicle	Traffic Hazard	Traffic Pursuit	Traffic Stop	Transport	Trespassing	Unknown Type of Dispute	Vandalism	Vehicle Check	Vehicle/ Person, etc	Verbal Dispute	Violate Court Order	Violation of Restraining Order	Warrant Service	Wave Down		Welfare Check	Arson	Arson Just Occ'd	11-44N	11-46R	166.4	166.4R
2006	In the Vicinity of the Peaking Reach					2					3															25
	Mammoth Bar																									2
	Ruck-a-Chucky Area/Drivers Flat Rd								1		1															5
	French Meadows Reservoir Area																									1
	French Meadows Reservoir																									2
	French Meadows Reservoir Area																									5
	Hell Hole Reservoir Area																									4
	Ralston Afterbay Area								1																	1
	Foresthill Bridge			1	1		17				1	20					1	1	25							179
	Foresthill Road/ Drivers Flat Road						4					1					1									9
	Lake Clementine Area						6					3	1				3	1								39
	Lake Valley Reservoir																									1
	North Fork American River Watershed		1						1							1										7
	Putt Lake																									1
	Residential/ Developed Areas	1	39		22	2	601	7	67	120	91	106	1	109	11	23	42	17	125	1	2	1		11		4,392
	Sugar Bowl Area																									22
	Sugar Pine Reservoir Area						2			2		1						1								48
<b>Total</b>	<b>1</b>	<b>40</b>	<b>1</b>	<b>23</b>	<b>2</b>	<b>632</b>	<b>7</b>	<b>69</b>	<b>123</b>	<b>92</b>	<b>135</b>	<b>1</b>	<b>110</b>	<b>11</b>	<b>23</b>	<b>44</b>	<b>23</b>	<b>151</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>4,743</b>	
2007	In the Vicinity of the Peaking Reach					4					9														34	
	Mammoth Bar																								3	
	Ruck-a-Chucky Area/Drivers Flat Rd										2														6	
	French Meadows Reservoir Area																								2	
	French Meadows Dam																								1	
	French Meadows Reservoir Area																	1							5	
	Talbot Campground																								1	
	Hell Hole Reservoir Area																	1							7	
	Long Canyon Area																								1	
	Big Bend Campground																								2	
	Blacksmith Flat at Ralston Ridge																								1	
	Butchers Flat																								1	
	Cisco Grove Campground								1									1							6	
	Devils Peak Warming Hut									1															1	
	Foresthill Bridge			1		8						55					1	25					1		237	
	Foresthill Road/ Drivers Flat Road				2	5						3													38	
	Lake Clementine Area				3	7						4													41	
North Fork American River Watershed											2		1											8		
Residential/ Developed Areas		36		21	1	654	13	89	115	79	154	1	76		15	35	31	118	2	1	4	6	17	4,954		
Sugar Bowl											1													22		
Sugar Pine Reservoir Area						4			2		3													67		
<b>Total</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>27</b>	<b>1</b>	<b>682</b>	<b>13</b>	<b>90</b>	<b>119</b>	<b>79</b>	<b>232</b>	<b>1</b>	<b>77</b>	<b>0</b>	<b>15</b>	<b>35</b>	<b>32</b>	<b>146</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>17</b>	<b>5,438</b>	
<b>Total (2006 and 2007)</b>	<b>1</b>	<b>76</b>	<b>1</b>	<b>50</b>	<b>3</b>	<b>1314</b>	<b>20</b>	<b>159</b>	<b>242</b>	<b>171</b>	<b>367</b>	<b>2</b>	<b>187</b>	<b>11</b>	<b>38</b>	<b>79</b>	<b>55</b>	<b>297</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>17</b>	<b>17</b>	<b>10,161</b>	

<sup>1</sup>Blank boxes indicate that no emergency response incidents were reported.

**Table E-10. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses in the Vicinity of the Peaking Reach.**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>		Responding Agency <sup>4</sup>				Total
			Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	
<b>2006</b>							
American River Confluence @ Hwy 49 / Old Foresthill Rd.	<b>Fire</b>	FIRE, DEBRIS				1	1
		FIRE, SMOKE CHECK				1	1
		FIRE, WILDLAND				3	3
	<b>Law Enforcement</b>	LE FIREWORKS COMPLAINT				1	1
		LE, OTHER				1	1
	<b>Medical</b>	MED, TRAFFIC COLLISION	1			14	15
		MEDICAL				12	12
	<b>Other</b>	OTH, REFERRAL		1			1
	<b>Public Assistance</b>	PA, Agency				1	1
PA, OTHER					2	2	
<b>Total</b>			1	1	0	36	38
Mammoth Bar Recreation Area	<b>Law Enforcement</b>	LE, OTHER				2	2
	<b>Medical</b>	MED, TRAFFIC COLLISION				2	2
		MEDICAL				7	7
<b>Total</b>			0	0	0	11	11
<b>2006 Total</b>			1	1	0	47	49
<b>2007</b>							
American River Confluence @ Hwy 49 / Old Foresthill Rd.	<b>Fire</b>	FIRE, VEH PASSENGER				1	1
		FIRE, WILDLAND				2	2
	<b>Law Enforcement</b>	LE, OTHER				2	2
	<b>Medical</b>	MED, TRAFFIC COLLISION	1			18	19
		MED, With Extrication				1	1
		MEDICAL	1			8	9
	<b>Other</b>	OTH, MISCELLANEOUS				1	1
OTH, REFERRAL			3			3	
<b>Public Assistance</b>	PA, Agency				3	3	
<b>Total</b>			2	3	0	36	41

**Table E-10. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses in the Vicinity of the Peaking Reach (continued).**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>		Responding Agency <sup>4</sup>				Total
			Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	
<b>2007 (continued)</b>							
Mammoth Bar Recreation Area	<b>Medical</b>	MED, TRAFFIC COLLISION				2	2
		MEDICAL				14	14
	<b>Other</b>	OTH, MISCELLANEOUS				1	1
		OTH, REFERRAL		1			1
<b>Total</b>			<b>0</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>18</b>
Ruck a Chucky Area/ Drivers Flat Road	<b>Fire</b>	FIRE, VEH PASSENGER			1		1
		FIRE, WILDLAND			1		1
	<b>Medical</b>	MEDICAL			1		1
	<b>Other</b>	OTH, REFERRAL		1			1
<b>Total</b>			<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>
<b>2007 Total</b>			<b>2</b>	<b>5</b>	<b>3</b>	<b>53</b>	<b>63</b>

<sup>1</sup>A total of 163 and 173 incidents for 2006 and 2007, respectively, were provided to PCWA.

<sup>2</sup>LE: Law Enforcement; MED: Medical; OTH: Other; PA: Public Assistance.

<sup>3</sup>Miscellaneous incidents may include hydrant maintenance, CDF injury, vandalism/ break-ins, and hardware failure. Display incidents may include burning of propane tanks or other display information. A referral is a referral to another agency.

<sup>4</sup>Blank boxes indicate that no emergency response incidents were reported.

**Table E-11. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses.**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>	Responding Agency <sup>4</sup>						Total	
		Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	Roseville Fire	USDA-FS TNF		
<b>2006</b>									
American River Confluence @ Hwy 49 / Old Foresthill Rd.	<b>Fire</b>	FIRE, DEBRIS				1			1
		FIRE, SMOKE CHECK				1			1
		FIRE, WILDLAND				3			3
	<b>Law Enforcement</b>	LE FIREWORKS COMPLAINT				1			1
		LE, OTHER				1			1
	<b>Medical</b>	MED, TRAFFIC COLLISION	1			14			15
		MEDICAL				12			12
	<b>Other</b>	OTH, REFERRAL		1					1
	<b>Public Assistance</b>	PA, Agency				1			1
PA, OTHER					2			2	
<b>Total</b>		1	1	0	36	0	0	38	
Foresthill Bridge	<b>Fire</b>	FIRE, FALSE ALARM				1			1
		FIRE, WILDLAND				3			3
	<b>Law Enforcement</b>	LE FIREWORKS COMPLAINT				5			5
		LE, INVESTIGATION				1			1
	<b>Medical</b>	MED, TRAFFIC COLLISION				3			3
		MED, WATER RESCUE				1			1
		MEDICAL				6			6
	<b>Other</b>	OTH, MISCELLANEOUS				1			1
		OTH, REFERRAL		1					1
		OTH, VEG MGMT				1			1
<b>Public Assistance</b>	PA, PERSON				1			1	
<b>Total</b>		0	1	0	23	0	0	24	
Foresthill Rd. near Drivers Flat Rd. Intersection	<b>Medical</b>	MED, TRAFFIC COLLISION			3			3	
		MEDICAL			1			1	
	<b>Other</b>	OTH, REFERRAL		1				1	
	<b>Public Assistance</b>	PA, PERSON			1			1	
<b>Total</b>		0	1	5	0	0	0	6	
Foresthill Road	<b>Fire</b>	FIRE, SMOKE CHECK				1		1	
		FIRE, WILDLAND	1					1	
	<b>Medical</b>	MED, TRAFFIC COLLISION				2		2	
<b>Total</b>		1	0	0	3	0	0	4	

**Table E-11. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses (continued).**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>		Responding Agency <sup>4</sup>						Total
			Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	Roseville Fire	USDA-FS TNF	
<b>2006 (continued)</b>									
Foresthill Road/ Lake Clementine Area	<b>Fire</b>	FIRE, DEBRIS				1			1
	<b>Hazard</b>	HAZ, FIRE MENACE STANDBY				2			2
	<b>Law Enforcement</b>	LE, OTHER				2			2
	<b>Medical</b>	MED, TRAFFIC COLLISION				9			9
		MEDICAL				6			6
	<b>Public Assistance</b>	PA, Agency				1			1
<b>Total</b>			0	0	0	21	0	0	21
Hwy 49	<b>Medical</b>	MED, TRAFFIC COLLISION	2			3			5
<b>Total</b>			2	0	0	3	0	0	5
Mammoth Bar Recreation Area	<b>Law Enforcement</b>	LE, OTHER				2			2
	<b>Medical</b>	MED, TRAFFIC COLLISION				2			2
		MEDICAL				7			7
<b>Total</b>			0	0	0	11	0	0	11
Residential/ Developed Areas	<b>Fire</b>	FIRE, DEBRIS			3	1			4
		FIRE, FALSE ALARM			2				2
		FIRE, RES STRUCT WILDLAND			1				1
		FIRE, RESIDENTIAL			2				2
		FIRE, RESIDENTIAL ALARM			3				3
		FIRE, SMOKE CHECK			7	1			8
		FIRE, WILDLAND			7				7
	<b>Law Enforcement</b>	LE FIREWORKS COMPLAINT			1				1
		LE, OTHER			2				2
	<b>Medical</b>	MED, TRAFFIC COLLISION			7	1			8
		MEDICAL			11	1			12
	<b>Other</b>	OTH, MISCELLANEOUS			1				1
		OTH, REFERRAL		1					1
		OTH, TRANSFER			1				1
	<b>Public Assistance</b>	PA, Agency			1				1
<b>Total</b>			0	1	49	4	0	0	54
<b>2006 Total</b>			4	4	54	101	0	0	163

**Table E-11. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses (continued).**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>	Responding Agency <sup>4</sup>						Total	
		Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	Roseville Fire	USDA-FS TNF		
<b>2007</b>									
Butcher Ranch	Fire	FIRE, WILDLAND			1				1
<b>Total</b>			<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
American River Confluence @ Hwy 49 / Old Foresthill Rd.	Fire	FIRE, VEH PASSENGER				1			1
		FIRE, WILDLAND				2			2
	Law Enforcement	LE, OTHER				2			2
	Medical	MED, TRAFFIC COLLISION	1			18			19
		MED, With Extrication				1			1
		MEDICAL	1			8			9
	Other	OTH, MISCELLANEOUS				1			1
		OTH, REFERRAL		3					3
Public Assistance	PA, Agency				3			3	
<b>Total</b>			<b>2</b>	<b>3</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>41</b>
Foresthill Road/ Lake Clementine Area	Fire	FIRE, OTHER				1			1
		FIRE, VEH PASSENGER				1			1
	Law Enforcement	LE FIREWORKS COMPLAINT				1			1
	Medical	MED, TRAFFIC COLLISION	1			11			12
		MEDICAL				8			8
<b>Total</b>			<b>1</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>23</b>
Residential/ Developed Areas	Fire	FIRE, COMMERCIAL ALARM			1	1			2
		FIRE, DEBRIS			2				2
		FIRE, OTHER			1				1
		FIRE, RESIDENTIAL			5				5
		FIRE, SMOKE CHECK			3				3
		FIRE, WILDLAND			5				5
	Law Enforcement	LE FIREWORKS COMPLAINT			1				1
		LE, OTHER				1			1
	Medical	MED, TRAFFIC COLLISION	3		10	2			15
		MEDICAL	1		7				8
	Other	OTH, MISCELLANEOUS			4				4
		OTH, REFERRAL		4					4
		OTH, TRANSFER			1				1
Public Assistance	PA, Agency			1				1	
<b>Total</b>			<b>4</b>	<b>4</b>	<b>41</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>53</b>

**Table E-11. Summary of 2006 and 2007 Grass Valley CAL FIRE Emergency Incident Responses (continued).**

Location <sup>1</sup>	Incident Type <sup>2,3</sup>	Responding Agency <sup>4</sup>						Total	
		Auburn City Fire	CAL FIRE	Foresthill Fire Protection District	Placer County Fire	Roseville Fire	USDA-FS TNF		
<b>2007 (continued)</b>									
Foresthill Rd. near Drivers Flat Rd. Intersection	Medical	MEDICAL			1				1
	Other	OTH, REFERRAL		1					1
<b>Total</b>			<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
Foresthill Bridge	Fire	FIRE, OTHER				1			1
		FIRE, WILDLAND				3			3
	Law Enforcement	LE FIREWORKS COMPLAINT				3			3
	Medical	MED, VIOLENCE INVOLVED				3			3
		MEDICAL				6			6
	Other	OTH, MISCELLANEOUS				5			5
		OTH, REFERRAL		2					
Public Assistance	PA, Agency				2				2
<b>Total</b>			<b>0</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>25</b>
Foresthill Road	Medical	MED, VIOLENCE INVOLVED				1			1
		MEDICAL	1						1
<b>Total</b>			<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>
Mammoth Bar Recreation Area	Medical	MED, TRAFFIC COLLISION				2			2
		MEDICAL				14			14
	Other	OTH, MISCELLANEOUS				1			1
		OTH, REFERRAL		1					
<b>Total</b>			<b>0</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>18</b>
Mosquito Ridge Road	Fire	FIRE, DEBRIS			1				1
		FIRE, WILDLAND			1				1
	Medical	MED, TRAFFIC COLLISION			2				2
<b>Total</b>			<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
Ruck a Chucky Area/ Drivers Flat Road	Fire	FIRE, VEH PASSENGER			1				1
		FIRE, WILDLAND			1				1
	Medical	MEDICAL			1				1
		OTH, REFERRAL		1					
<b>Total</b>			<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Total 2007</b>			<b>8</b>	<b>12</b>	<b>50</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>173</b>
<b>Total 2006 - 2007</b>			<b>12</b>	<b>16</b>	<b>104</b>	<b>204</b>	<b>0</b>	<b>0</b>	<b>336</b>

<sup>1</sup>A total of 163 and 173 incidents for 2006 and 2007, respectively, were provided to PCWA.

<sup>2</sup>LE: Law Enforcement; MED: Medical; OTH: Other; PA: Public Assistance.

<sup>3</sup>Miscellaneous incidents may include hydrant maintenance, CDF injury, vandalism/ break-ins, and hardware failure. Display incidents may include burning of propane tanks or other display information. A referral is a referral to another agency. Other, Cov incidents are cover assignments for local government agencies. Other, Transfer incidents are transfers to Poison Control. A PA, Agency incident is assistance to an agency/ hasty search. A PA, Person is assistance to a person.

<sup>4</sup>Blank boxes indicate that no emergency response incidents were reported.

**Table E-12. Summary of 2006 and 2007 Camino CAL FIRE Emergency Incident Responses in the Vicinity of the Peaking Reach.**

Year	Location <sup>1,2,3</sup>	Incident Type								Total	
		Fire		Medical			Public Assistance				
		Fire - Aircraft	Fire - Veh Passenger	Medical	Medical - Traffic Collision	Medical - MED17	Referral to Other Agency	Public Assistance - Search and Rescu	Public / Agency Assistance		Public Assistance - Other
2006	American River Confluence @ Hwy 49 / Old Foresthill Rd.			2	9		13		1		25
	Quarry Trail Access			1	1		1				3
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>28</b>
2007	American River Confluence @ Hwy 49 / Old Foresthill Rd.	2	1	1	5		5	1	1	1	17
	Quarry Trail Access					1		1			2
	<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>19</b>

<sup>1</sup>A subset of the data provided by the Camino CAL FIRE was identical to the dataset provided by the USDA-FS Eldorado National Forest. These data are included in the data summary for the USDA-FS Eldorado National Forest only.

<sup>2</sup>A total of 823 and 736 incidents for 2006 and 2007 respectively, were reported to PCWA. Totals include the 117 incidents reported by Camino CAL FIRE and the USDA-FS Eldorado National Forest. These data are summarized in Tables E-2 and E-3.

<sup>3</sup>Blank boxes indicate that no emergency response incidents were reported.



**MAP**