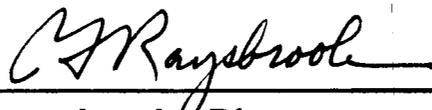


CALIFORNIA DEPARTMENT OF FISH AND GAME
POLICIES AND PROCEDURES
FOR RESPONSE TO FIRES IN WILDLANDS

September 6, 1995

Approved by:

A handwritten signature in cursive script, appearing to read "C. J. Raybrooke", written over a horizontal line.

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I. Introduction

These policies and procedures are your guide when you are asked to respond to wildland fires. Their implementation will provide 1) rapid, consistent, and appropriate response by Department of Fish and Game (DFG) personnel, 2) basic information to guide you during fire incidents, and 3) a foundation for developing and maintaining strong professional relationships with the Department of Forestry and Fire Protection (CDF). This document is not intended to dictate to CDF their fire suppression activities, rather it is to allow DFG to assist CDF in minimizing impacts to wildlife, fisheries, plants, and their habitats.

In recent years, many California counties and suburban communities have been devastated by catastrophic fires and the issues of public safety and property protection have been elevated in both the public policy and resource management arenas. Three issues have been at the center of public debate and discussion: the role of fire as an ecological process in wildlands, the effects of human expansion into wildlands on fire regimes, and integration of wildland fire management and public and property protection.

Scientists and land managers understand that fire plays a major role in the natural viability of many of California's ecosystems, such as annual grassland, mixed coniferous forest, and chaparral. Fire is an essential disturbance phenomenon to California's plant communities and soils, which in turn affect watersheds, wildlife, and fisheries.

Human influences have altered natural fire regimes across the State. Years of fire suppression have led to high fuel loads in many regions of California. Additionally, California's human population continues to move into wildland areas, exposing both themselves and the wildland to a greater frequency of fire. In some cases, the wildlife, fisheries, and plant communities the Department is mandated to protect and manage may be in jeopardy due to wildfires not characteristic of the ecology of a given area.¹ In other cases, fire has been effectively removed as an essential ecological disturbance.

Recent wildland fires have demonstrated the need for State, County, and local entities to better coordinate and prepare for major fire events. In 1994, the Board of Forestry and the Fish and Game Commission recognized that coordination between the CDF and our Department was necessary to meet the goals of fire management and ecosystem protection. In the Spring of 1994, the Board and Commission adopted the *Interim Joint Policy on Pre-fire, During Fire, and Post-fire Activities and Wildlife Habitat* (Appendix I). In May of 1995, the Board and Commission heard the first annual update on the progress of both departments' implementation of the interim policy. Both the Board and Commission were impressed with the progress of CDF and DFG, and the policy now may be considered in place until it is either amended or discontinued.

This is of particular concern where habitat has been greatly fragmented by urban encroachment. In these cases, small islands of native habitat may not be able to recover from fire events as was the case when the habitat was not fragmented.

The Department has worked with CDF and other agencies and organizations involved in wildland fire issues, including management, suppression, and ecology. These policies and procedures reflect the Department's resolve to minimize the impacts of fire suppression and human-caused fires to wildlife, fisheries, plants, and their habitats while also striving to establish conditions so that natural fires and ecologically appropriate prescribed fires are allowed to perform fire's essential role in California's ecosystems.

Staffing and fiscal constraints within DFG are severe. We recognize that our involvement in wildland fire response could increase your workload and take you away from existing responsibilities. DFG is making these facts known clearly to all involved, and we are pursuing solutions. However, the joint policy adopted by the Board of Forestry and the Fish and Game Commission made our involvement not an issue of "if" but of "how and to what extent." It is hoped that these policies and procedures maximize our input while minimizing the actual time and energy we must expend.

II. Document Organization and Use

This document is organized in three main sections: **Pre-Fire, During Fire, and Post-Fire.** Each main section is further divided into **Board of Forestry-Fish and Game Commission Joint Policy**, and the Department's supplemental **Policy, Procedures, and Training.** There are several appendices, the most prominent being the **Board of Forestry-Fish and Game Commission Joint Policy** in its entirety.

The goal of DFG is that your primary involvement in wildland fires will be pre-fire and post-fire. Pre-fire planning will occur prior to fire season and will involve CDF and other fire management agencies in your area. Post-fire response, which includes watershed and vegetation recovery and restoration, will ensue either during or just after the fire. Your involvement during fire activities may be small because the goal at that time is to contain and put out the fire. DFG does not wish to hamper this effort. Input on biological issues may occur, but it is hoped that much of those discussions, planning, and strategies will have occurred during the pre-fire planning.

You should be very familiar with the procedures, your responsibilities, your Region's responsibilities, outside resources at your disposal (other DFG staff, maps, Headquarters (HQ) assistance), and your CDF colleagues. Thus, **you should read this document now.** Coordinate with the other involved staff in your Region. Contact involved CDF and DFG HQ staff and build strong professional relationships. Many of you already work closely with CDF. This is your opportunity to strengthen those relationships. For others, this is your opportunity to build new relationships that may very well go beyond wildland fire response.

III. Policy and Procedures on Fires in Wildlands

A. PRE-FIRE

1. *Excerpt from Joint Board of Forestry-Fish and Game Commission Policy:*

a. Joint Policy from Board and Commission to their respective Departments

- 1) *Consistent with this policy, for 1994 and 1995 the Departments shall complete as many vegetation management activities as possible on the urban interface, especially in Southern California. CDF and DFG should facilitate such projects on the highest priority. The Departments shall coordinate existing data and surveys, consult as appropriate with federal wildlife agencies, and assign additional staff as needed to facilitate completion of this task. To the extent feasible given staff, funds, fire season dates, and program time frames, the Departments should seek to obtain additional biological data needed to fill information gaps; however, this charge should not delay implementation of an aggressive vegetation management program.*
- 2) *For 1996 and beyond, the Departments shall develop or update a joint (CDF, DFG, and other agencies) five-year vegetation management program that delineates proposed activities for this time frame consistent with the goals in the Board of Forestry Fire Plan. This process shall: 1) encourage early consultation between fire management agencies and other wildlife agencies; 2) identify all areas that may be candidates for prescribed fire or other pre-fire activities; and 3) assess the resources at stake and the anticipated effect of pre-fire activities.*
- 3) *The Departments shall aggressively seek to incorporate fire protection requirements for both development and wildlife reserve planning. The Departments should coordinate such efforts and seek to have fire protection issues addressed at the earliest planning stage possible, including integrated planning for management of wildlife habitat and defensible space.*
- 4) *Consistent with their statutory mandates, the Departments shall support enforcement of clearance laws and recognize that property owners are legally required to provide clearance around structures as specified in Section 4291 of the Public Resources Code; and that communities in high fire hazard areas need to have an aggressive fire safe program, including clearance and fuel breaks around existing structures. The Departments shall aggressively seek to involve the private sector in assuming greater responsibility for fire prevention.*

b. Policy from the Commission to the Department of Fish and Game

- 1) *Prior to the start of fire season, DFG shall meet with and keep CDF informed at the regional level regarding the location of important plant and animal communities and their related ecosystems. To the extent that resources permit, the Department shall provide information regarding the location of the plant and animal communities and related ecosystems. The Department shall report to the Commission at its May meeting on the outcome of the sessions, including any issues that could not be resolved.*

2. Department Pre-fire Policy:

The Department of Fish and Game recognizes the importance of natural fire regimes to many California ecosystems. Additionally, DFG recognizes that catastrophic wildland fires pose a threat to life and property in California. Consequently, DFG will work with local, county, State, and federal agencies, especially CDF, to conserve and manage wildland vegetation to both promote healthy ecosystems and to minimize impacts from catastrophic fire events within those ecosystems.

In pre-fire planning and coordination, the DFG expects to maximize its usefulness and minimize its actual during-fire involvement.

3. Department Procedures:

a. Membership on CDF's Headquarters Fire Planning and Procedures Task Force

DFG will meet annually with CDF to review CDF's Vegetation Management Program (VMP) and Emergency Watershed Protection (EWP) response plans and develop strategies for the upcoming fire season; the departments may discuss and determine:

- 1) Recommendations for revisions to policies concerning prescription or suppression of fires.
- 2) Results and interpretations of post-fire monitoring (watershed protection, reduction in fuel-load hazard, loss or protection of critical biological resources, etc.)
- 3) Identification of key areas of the State with sensitive resources.
- 4) Changes to ranking or identification of critical biological resources. As necessary, DFG may participate in developing GIS maps which display new or revised biological information pertinent to fire policy and procedures.

- 5) Major impacts to wildlife, fisheries, and plants from vegetation management, fire suppression, and wildland fire. DFG may participate with CDF in developing management techniques appropriate for key resource areas. DFG may support practices which eliminate or minimize adverse biological impacts. DFG shall also recommend practices that have beneficial effects.

RESPONSIBLE DFG STAFF: NHD Division Chief, in consultation with Regional Managers, and headquarters and regional Technical Specialists.

b. Regional Coordination with CDF

DFG will meet annually at the regional level with appropriate CDF staff² to review strategies prior to the next fire season. These regional meeting will be the primary means of interdepartment coordination and cooperation on fire ecology, fuels management, and wildfire response. Each Region should determine what needs to be discussed and decided upon for the health of its key biological resources.

Prior to the annual meeting with CDF, regional DFG Technical Specialists (SEE B.3.b.1.)d] may meet with regional representatives of Natural Heritage, Wildlife Management, and Inland Fisheries to discuss and develop consensus on issues to be discussed with CDF, including fire suppression methods, sensitive resource, revegetation, and during-fire recommendations.

Box One is one recommended list of topics for discussion and coordination with CDF (please see next page for Box 1):

² Appropriate staff may be the CDF Region Chief, assistant Area Chiefs, and/or Ranger Unit Chiefs. This decision is left to the discretion of DFG Regional Managers.

Box 1. Topics for Pre-fire Planning

- Review of local CDF Ranger Units' proposed annual and 5-year vegetation management programs.
- Recommendations for regional practices concerning prescription or suppression of fires, emphasizing use or development of vegetation management techniques appropriate for key, regional resource areas. **DFG will support practices which either eliminate or minimize adverse biological impacts or have beneficial effects for habitat.**
- Identification and review of key regional areas of with sensitive resources (watersheds and waterways, deer and other game habitats, sensitive species, Significant Natural Areas, Department owned or managed lands).
- Identify data that needs to be added to the GISs of both departments.
- Development or review of regional, pre-fire management plans based on both the needs of all species and their habitats to (a) maintain the health of the entire ecosystem in question, and (b), reduce fire-hazard risks.
- Evaluate any results of regional post-fire monitoring (watershed protection, reduction in fuel-load hazard, loss or protection of critical biological resources, etc.)
- Establishment of Emergency Watershed Protection response standards and procedures.

RESPONSIBLE DFG STAFF: Regional Manager, Region Supervisors (Inland Fisheries, Natural Heritage, and Wildlife Management) and DFG Region Technical Specialists.

c. Public Information

Education, outreach, and public information are fundamental to the success of our management and conservation efforts. To that end, the DFG should coordinate with CDF to provide public information and education on appropriate procedures and behaviors for life, property, and wildlife protection prior to fire season.

RESPONSIBLE DFG STAFF: Conservation Education, in consultation with NHD Chief, Regional Managers, and headquarters and regional specialists.

d. Environmental Review Process for Programmatic and Individual Prescribed Burn Plans

DFG staff may review CDF burn plans and respond to the appropriate CDF staff by or before the date requested by CDF. Each Region, in conjunction with the appropriate CDF Ranger Units, should develop a protocol for review. The following steps constitute one suggested protocol for reviewing burn plans:

- 1) After receiving notification of a plan, immediately notify CDF contact-person to confirm receipt and your intent to review.
- 2) Review the plan; include but do not restrict review to effects to critical habitat for fisheries, plants, and wildlife including sensitive species, effects to riparian habitat and watersheds, effects to any listed species, Significant Natural Areas, Species of Special Concern, or Special Habitats.
- 3) Through Regional Manager or designee, submit comments to CDF by or before stated due date or make other arrangements with CDF.

Send a copy of your response to the DFG Fire Ecologist.

- 4) If necessary, make an appointment for a site visit.
- 5) Track burn plans (CDF notification, your comments, site visits, follow-ups.
- 6) Following burn, coordinate with CDF to evaluate immediate effects, and if deemed necessary and possible, establish and implement trend and effectiveness monitoring at burned and treated sites. Appendix II defines and describes the types of monitoring.

If you and CDF staff deem it necessary, conduct comprehensive monitoring at the burn site (see Post-fire section).

RESPONSIBLE DFG STAFF: Staff responsible for burn plan reviews. This is currently Region Environmental Services (ES) Specialists, Wildlife Management, Inland Fisheries Biologists, and Plant Ecologists.

e. Resource Assessment

Biological resources, including wildlife, fisheries, plants, and natural communities which are within areas that are affected by wildland fires and fire suppression activities may need to be surveyed, mapped, and evaluated for their health and contribution to the ecosystem in which they exist. Such assessment will allow DFG to 1) manage vegetation communities which will result in an overall benefit to each unique ecosystem, and 2) plan statewide and on-site strategies for protection of important biological resources from wildland fires.

RESPONSIBLE DFG STAFF: Regional Teams (wildlife and Inland Fisheries Biologists, Plant Ecologists or Botanists) do field evaluation and data collection; headquarters staff do statewide analysis in consultation with Regional Teams)

1) Department Lands

As funds allow, DFG will assess its lands and incorporate the information into GIS and databases, including NDDDB. Each Region will be responsible for developing a schedule for assessment. Divisions will be responsible for assisting Regions in synthesizing data state-wide.

Regions will incorporate information gained from assessments into management plans. The Lands Program of Natural Heritage Division may assist the Regions in formalizing methods and procedures. Some information could be obtained during the regional annual land inspections if a data field was added to the DFG Land Inspection forms. The assessment will include but not be limited to:

- a) Map(s) displaying distribution of wildlife and its critical habitat, watersheds, plant communities, sensitive and listed species.
- b) Identification of important resources that fire suppression efforts should avoid whenever possible.
- c) Areas where CDF may stage their fire suppression bases. If both departments determine the necessity, such maps will be provided to CDF.

RESPONSIBLE DFG STAFF: Regional staff and Area Managers who write management plans.

2) Natural Communities Conservation Program (NCCP) lands or other habitat conservation planning lands

DFG may work with involved parties (e.g., cities, counties, affected land agencies, private land owners) to assess resources. Information shall be included in NCCP documents or Habitat Conservation Plans (HCP), and DFG shall ensure that all affected parties receive information about fire and conservation.

RESPONSIBLE DFG STAFF: NCCP personnel or lead staff of regional or HCP team.

3) Other State Lands and Private Property

Through environmental review, existing land management planning procedures, and other means, DFG may recommend to state agencies and private property owners that they assess their biological resources and the effects fire and fire management might have upon them.

DFG should promote outreach in all appropriate manners, including its own education programs and coordination with CDF's Fire Safe Program.

RESPONSIBLE DFG STAFF: Regional ES and headquarters ESD staff; other reviewing and planning staff.

f. Resource Management

When appropriate, the Department may assist other agencies (e.g., CDF, Department of Parks and Recreation, others) in conducting ecologically appropriate vegetation management for the purposes of 1) reducing fuel-load, thereby reducing the risk of catastrophic fires to human life and property, and 2) benefitting wildlife habitats, and 3) restoring ecologically balanced or natural fire regimes. Vegetation management includes prescribed burns, fire breaks, mechanical removal and manipulation of vegetation and grazing.

1) Vegetation Management

a) Department Lands

- i. As part of DFG's management plan programs, the regional biologist responsible for a particular property will develop a vegetation management program plan as part of or an addendum to the management plan to increase or maintain the overall ecological viability of the area in question while also reducing any potential negative impact of wildland fire.
- ii. Each management plan shall have a **Fire Response Element** and may have a **Prescribed Fire Element**. Box 2 (please see next page) is one recommended plan outline:
- iii. On DFG lands that can sustain such use, management plans will identify both

(1) **Fire Response Areas**, areas within the DFG property where CDF response may be necessary, and (2) **Staging Areas**, areas where CDF may set up its equipment and fire response headquarters (if necessary to do so on DFG lands).

RESPONSIBLE DFG STAFF: Regional biologists responsible for management of DFG property.

b) NCCP lands or other habitat conservation planning lands

Each NCCP or Habitat Conservation Plan (HCP) Area will develop a vegetation management program plan to increase or maintain the overall ecological viability of the area in question while also reducing any potential negative impact of wildland fire.

- ii. Each NCCP or HCP Reserve will develop a fire response plan, and if appropriate, will identify fire response areas and staging areas.
- iii. Management plans for protected lands will incorporate DFG and CDF fire policies and procedures.

RESPONSIBLE DFG STAFF: NCCP or HCP biologists responsible for planning efforts.

c) Other State Lands and Private Property

DFG may recommend to state agencies and private property owners that they develop vegetation management plans for their lands that are ecologically appropriate and also reduce the risk of fire.

RESPONSIBLE DFG STAFF: Regional ES and headquarters ESD staff; other reviewing and planning staff.

Box 2. Components for Fire Response Element or Prescribed Fire Element* for Department of Fish and Game Lands

- a. Describe the vegetation and landscape features of the site.
 - b. Discuss the role of natural or prescribed fire at the site and identify, if available, the fire history (frequency, intensity, and season of occurrence).
 - c. Identify biological resources at the site that may be particularly sensitive to fire or fire suppression activities.
 - d. Identify seasonal periods and conditions when wildfires may be harmful to specific biological resources, specific habitat types, or the entire site.
 - e. Identify seasonal periods and conditions when wildfires or prescribed fire may be beneficial to specific biological resources, specific habitat types, or the entire site.
 - f. Provide communication protocol and identify staff who are responsible or knowledgeable about site.
 - g. Provide detailed map for use in fire response or prescribed burn implementation. The map should include, but not be limited to, road access, water resources, sensitive biological resources, structures, and any possible impediments or hazards to fire-fighting equipment or personnel.
- * Components unique to a Prescribed Fire Element:
- aa. Identify management goals of prescribed burn.
 - bb. Identify burn plan protocol.
 - cc. Provide burn team responsibilities.

2) Habitat Enhancement

The goal of habitat enhancement is to restore or enhance natural communities to and habitats historically affected by fire, by safely reintroducing fire as an ecological disturbance. DFG should promote restoring or enhancing habitats historically affected by fires when such efforts will have positive effects on the ecosystem's viability and native wildlife. Box 3 is one example for evaluating habitat.

RESPONSIBLE DFG STAFF: Regional Botanists/Plant Ecologists and Area Managers.

Box 3. Habitat Evaluation: Suggested Criteria.

- a) What is the historical role and behavior (frequency, intensity, season) of fire in the natural community?
- b) Fire ecology of different natural communities: What are the effects of fire on the different species within the community?
- c) Strategies for restoration and enhancement: What is the current condition of the habitat and what are the desired goals? What changes are necessary to attain the goals? What is the time-line for achieving the goals?
- d) Appropriateness of restoration and enhancement: What techniques are suitable? What are the probable effects of the techniques? What are the ecological, management, and economic costs and benefits of the techniques?
- e) Type and degree of vegetation management: Are mechanical means necessary for either ecological reasons or public safety reasons (due to unnatural build-up of dead and senescent plant material) prior to use of prescribed fire?
- f) Prioritizing of areas to be restored or enhanced: *where does this particular habitat place within DFG's priority scheme?*

4. Training:

As funding and time are available, all identified responsible staff will be trained in Department Fire Policy and Procedures and in CDF Incident Command System (ICS) training. Additional training, such as the U.S. Forest Service's Burned Area Emergency Treatment (BAER) Training System would be useful if training funds are available.

DFG STAFF TO RECEIVE TRAINING: Regional ES/Wildlife/Fisheries/Plant Ecology/Botany staff responsible for carrying out fire policies and procedures; all regional supervisors, Regional Managers, Division Chiefs, HQ staff responsible for carrying out fire policies and procedures.

B. DURING FIRE

1. Excerpt from Joint Board of Forestry-Fish and Game Commission Policy:

a. Joint Policy from Board and Commission to their respective Departments

- 1) *When there is a conflict between protecting human life and other values, human life should receive top priority. Protection of property, habitat of sensitive, threatened, and endangered species, timber, and watershed values should receive careful consideration when choosing suppression tactics consistent with the Board's Fire Plan. DFG and CDF will work together to implement the most appropriate fire suppression methods and will report annually to the Board and Commission on the operation of this policy.***
- 2) *The Departments shall jointly evaluate activities during fire and report to the Board and Commission at their January meetings.***

b. Policy from the Commission to the Department of Fish and Game

- 1) *As part of the Incident Command System (ICS), the Department shall make available a local plant, wildlife, and fisheries specialist to provide advice during wildfires or prescribed burns that may threaten important wildlife or plant communities.***
- 2) *The Department shall train appropriate field personnel in use of the Incident Command System and periodically renew this training.***
- 3) *The Department shall work with CDF at the regional or local level to identify fire suppression tactics that have potential long-term effects on ecosystems.***

2. Department During Fire Policy:

During a fire, DFG will be available to provide CDF with technical advice about ecological issues concerning wildlife, fisheries, and sensitive plants, and their habitats in the burn area and to explore alternative fire suppression methods to minimize adverse impacts. The Department will provide this information through CDF's Incident Command System (ICS).

The Department's involvement will not to interfere with fire suppression efforts to protect life and property. The role of DFG is to lend assistance and advise CDF on how to protect the natural environment as much as possible from the impacts of fire suppression and human-caused fires while allowing fire-fighting to proceed unimpeded.

The Department believes its involvement during fire incidents is the least critical for our effectiveness in fire ecology and fuels management. Thus, if the DFG is

successful in its pre- and post-fire activities and planning, during-fire activities may be minimal.

3. Procedures:

Unlike both the previous pre-fire and subsequent post-fire procedures, during fire procedures are more concisely defined. Responding to wildland fire incidents do not allow as many options for any given problem or circumstance. Consequently:

- Follow the procedures exactly.
- Learn these procedures now in case you are contacted to represent the DFG at a fire incident.
- Do not infer that the length of these procedures corresponds to the DFG putting high priority on incident response. Pre- and post-fire involvement are the DFG's priorities.

a. Circumstances for which Department Personnel will be contacted

- 1) Any "extended attack" or "major" fire as designated by CDF. (These are the fires of large acreage, and generally, the ones that have rehabilitation planning teams assigned. These teams are the Emergency Watershed Protection teams (EWP teams).
- 2) The CDF Incident Commander (IC) believes the fire is of a magnitude or intensity that DFG participation may benefit the wildlife resource or the State's response requirements, such as:
 - a) The IC knows that the wildfire is on or approaching DFG owned or managed lands.
 - b) The IC is assigning an EWP team. **DFG should be involved in all revegetation or restoration plan development.**
 - c) The IC knows that the wildfire is occurring in sensitive habitat, e.g., endangered species, riparian, vernal pools, and other habitats.

b. Fire Incident Response

- 1) Notification of Fire Incident
 - a) Dispatch calls from CDF will be made to Department (DFG) Dispatch, who will then contact appropriate Department regional supervisors (as designated by the Regional Manager) until a supervisor is reached), or if none of the supervisors is contacted, the Regional Manager's secretary will be given the message and will be responsible for contacting a supervisor. CDF's procedures are described in Appendix III.

- b) The DFG 24-hour Dispatch Center will have the FIRE RESPONSE TEAM Dispatch List, containing a list of DFG employees to call and instructions on how to determine whom to call. Contact your Regional Manager to attain the list for your Region.
- c) When CDF calls DFG, the following information must be provided to DFG, or DFG must request it from CDF:
 - i. County of location of the fire
 - ii. Approximate location of the fire
 - iii. Call-back telephone number at CDF
 - iv. Incident Number
 - v. Incident Request Number(s) for each Department staff person reporting to the fire incident.

Each fire incident is assigned an Incident Number and a Request Number. The Incident Number includes letters or characters that represent the CDF Ranger Unit involved in the fire response and a series of numbers representing which sequential fire it is in that area (example: SLR-011 represents the San Luis Obispo County Ranger Unit and the eleventh fire that Unit responded to). The Request Number includes the letter 'O' following by a series of numbers representing the chronological order in which you were requested (example: O-115 signifies that you were the fifteenth person requested to report to the incident; the first number is always a '1'). The DFG Dispatch, Region secretary, and regional supervisor must get the Incident and Request Numbers and pass them on to the appropriate people as they are contacted. The Incident Number and Request Numbers are the references used for tracking personnel, and costs for every fire in the State. Without the numbers, the CDF cannot properly check you into the fire incident and the DFG cannot be reimbursed for costs.

- d) DFG Dispatch will determine which DFG Region is involved and call the appropriate regional supervisors for that Region until they get a response. That supervisor will then make a decision whether DFG needs to be involved in the fire incident. If the supervisor deems that DFG involvement is appropriate, that supervisor is responsible for contacting regional staff and assigning them to represent the Department at the fire incident (staff will be classified as Technical Specialists while responding to the fire).
- e) DFG Dispatch will convey the County of location of the fire, the approximate location of the fire, and the call back number at CDF to the region person taking the notification call.

- f) **DFG Dispatch must notify only one person in the that Region. It is then responsibility of the contacted supervisor to determine the appropriateness of DFG involvement and determine and contact the appropriate Department Technical Specialist.**

2) Confirmation of Incident Command System (ICS) Contact

Confirmation of ICS contact is an essential part of the dispatch process. DFG Dispatch will contact either a regional supervisor or a regional secretary. If a secretary has been contacted, that secretary must reach a regional supervisor in person. It must be remembered that this is an emergency response, so written or voice-mail messages are not appropriate. Once a supervisor is reached, that supervisor must report whether DFG is going to respond, and if DFG is going to respond, who was assigned to the fire and that person's estimated time of arrival at the fire scene to DFG Dispatch. Subsequently, the DFG Dispatch will confirm this information to CDF Dispatch. The name of the assigned Technical Specialist (typically a biologist) will then be passed on to CDF at the fire incident.

The Department Technical Specialist will use the CDF call-back number to request clarifying information, such as the following:

- a) **Exact location of the Incident Command Post (ICP) (which is where the Incident Commander (usually the Battalion Chief) is located, and where the Department Technical Specialist will report if going to the ICP).**
- b) **Location and extent of the fire. What are the current boundaries and which way is it moving.**
- c) **Time-line for containment.**

3) Role and Responsibilities of DFG personnel prior to reporting to Incident

Incident Command System (ICS) is a response system for emergency situations, e.g., the Cantara Spill. You will be briefed once you arrive at the planning area. However, you should keep the following facts in mind once you are requested to report to a fire event:

- a) **Your responsibility during fire events is to act as a DFG Technical Specialist. You are giving recommendations and advice to the IC on the biological resources of the affected area, tactics that might affect those resources, and options that both suppress the fire and protect the resource. Our purpose is not to interfere with the required fire suppression or lessen protection actions**

to lives and property. Rather, it is to recommend actions that also protect the integrity of the impacted habitat and its native plants and animals.³

- b) You should check records and maps to become acquainted with the approximate location of the fire before using the CDF call-back number to obtain more information.
 - c) Take appropriate data (data on local wildlife populations and sensitive species, maps or GIS information as available) when you report to the IC.
- 4) **On-Scene Coordination and Recommendations With CDF**
- a) When you arrive at the fire incident, you must check in and give your name, Incident Number, and Request Number to the IC or his designee. Once you report to the IC, you are functionally working for the IC and CDF.
 - b) You may be involved in during-fire response only or be asked for a post-fire evaluation. This evaluation is for EWP efforts (see part C. Post-fire).
 - c) DFG actions at the Incident Command Post will follow established ICS protocols. You will be instructed to following one of the following reporting scenarios:
 - Report directly to the IC.
 - The IC may designate a Liaison Officer. If one has been designated, you may be asked to report to the Liaison Officer.
 - The IC may designate a Planning Section Chief. If one has been designated, report to the Planning Section Chief.
 - The IC may designate a Liaison Officer and a Planning Section Chief. You will be told who to report to under these situations.
 - d) When requested, you will provide technical recommendations to CDF on the effects of fire suppression techniques and their effects on plants, animals, and habitats.

³ If differences of opinion arise during suppression or during the EWP process, which are difficult to resolve, please continue with your professional responsibilities. After the fire incident, contact your supervisor with your concerns. Your supervisor will inform the Regional Manager, who may arrange a discussion with CDF. The Regional Manager will brief the Natural Heritage Division Chief on both the issue and its resolution. The NHD Chief will both track issues annually and bring up unresolved policy issues at the annual joint CDF-DFG coordination meeting. Both departments will have the opportunity to discuss and resolve these differences both immediately after the fire incident and at annual, joint fire-response strategy meetings.

When you lack specific expertise in any given area (fisheries biology, wildlife biology, plant ecology), you should consult with other DFG staff that possess the expertise before you make comments or recommendations. It must be remembered that this is an emergency response, so you need to telephone or radio for consultation with other DFG biologists ASAP. Such consultation may be accomplished during a Regional fire-policy meeting prior to the annual meeting with CDF.

Things to consider, when appropriate:

- i. Using hand tools rather than heavy equipment (i.e. bulldozer).
 - ii. For a firebreak, back-burning an area rather than using heavy equipment (i.e., bulldozing).
 - iii. Allowing the fire to burn its natural course.
 - iv. Relocating fire-line.
 - v. Other(s) topics.
- e) You may maintain records, such as location of areas burned, acreage, and projected impacts to habitat and wildlife resources. You will keep the IC apprised, as required, through established channels.

You most likely will be asked to submit your technical recommendations in writing to the IC. Such reports should also be given to your supervisor and the HQ fire ecologist once your fire assignment has ended.

You will maintain Fire Incident Information (see Appendix IV) for you and DFG to track your involvement in fire incidents. Copies should also be given to your supervisor and the fire ecologist annually.

- f) If you, your supervisor, or your Regional Manager desire assistance in post-fire evaluation and development of a rehabilitation plan, your Regional Manager may request the assistance of other appropriate Regional staff (Plant Ecologist, Wildlife or Inland Fisheries Biologist) or HQ Technical Specialists. If you desire HQ assistance, your Regional Manager should contact the Chief of Natural Heritage Division, at (916) 324-8348.
- g) You may determine that wildlife rescue and/or rehabilitation is appropriate. Box 4 gives some guidelines for such endeavors.
- h) YOUR ASSIGNMENT WITH CDF WILL CONTINUE UNTIL YOU ARE RELIEVED BY THE IC OR THE IC'S DESIGNEE. IF YOU BELIEVE YOU NEED TO BE RELIEVED FROM THE FIRE INCIDENT OR YOU BELIEVE YOUR ASSISTANCE IS NOT NECESSARY, YOU MAY REQUEST TO BE DISMISSED. YOU MUST MAKE THIS REQUEST TO THE IC OR THE IC'S DESIGNEE.**
- i) IN NO CASE IS DFG STAFF AUTHORIZED OR PERMITTED TO APPROACH A FIRE LINE SINCE DFG PERSONNEL ARE NOT TRAINED IN FIRE-LINE SAFETY. THEY SHOULD NOT ENDANGER THEIR LIVES AND THE LIVES OF FIRE FIGHTERS.**

RESPONSIBLE DFG STAFF: DFG Technical Specialist.

5) Reimbursement

- a) Authorization of overtime: If your civil service classification allows for overtime, you are automatically authorized for overtime when ordered to a fire incident. No further authorization is required.**
- b) Reimbursement of overtime, travel, per diem, and extra expenses: reimbursement to DFG is authorized by CDF and paid by CDF's Emergency Fund (E-Fund).**

Reimbursement for personnel costs to the E-Fund is limited to overtime (E-Fund does not include base salary), per diem, and other out-of-pocket expenses incurred by an authorized DFG employee. At the conclusion of an assignment, the authorized DFG employee will be given a copy of CDF form, FC-33 (Overhead and Crew Activity Report) (see Appendix VI). This form will be used to verify the charges for reimbursement. A copy of the FC-33 must be attached to a copy of your Travel Expense Claim and Personnel Time Sheet and submitted to the CDF Accounting, CDF Headquarters, 1416 Ninth Street, Sacramento, California 95814.

CDF is in the process of drafting language for a simple agreement between CDF and DFG that will authorize reimbursement for personal services provided by DFG.

Box 4. Rescue and Rehabilitation of Wildlife.

Rescue and rehabilitation of wildlife, in some circumstances, may be appropriate. However, you need to remember that impacts of wildfire on fisheries, plants, and wildlife and their habitats are part of the ecology of many ecosystems in California.

- DFG personnel may, as necessary, rescue and temporarily confine injured wildlife.
- DFG personnel may coordinate the rescue of injured wildlife with volunteer efforts.
- DFG may identify procedures for prevention and control of illegal possession of orphaned and injured wildlife due to fire events.
- DFG personnel may coordinate wildlife rehabilitation efforts with established, permitted facilities. Each Region permits rehabilitation centers and maintains a list of permitted rehabilitators. To attain your Region's list, contact the Wildlife Protection Program in your Region. For the procedures concerning possession and rehabilitation of wildlife, review Fish and Game Code, Title XIV, Section 679: Possession of Wildlife and Wildlife Rehabilitation, (Appendix V).
- In some circumstances, you may decide to coordinate rehabilitation efforts with the DFG's Wildlife Investigations Laboratory (e.g., hawks, eagles, owls, falcons, large mammals like deer or antelope).

Wildlife Investigations Lab

1701 Nimbus Road
Rancho Cordova
(916) 355-0124
Contact: Laboratory Supervisor

- Rescue and rehabilitation may result in very positive or very negative publicity, but for most species, such efforts do not provide a benefit to the animal population itself.

4. Training:

As funding and time are available, all identified responsible staff will be trained in Department Fire Policy and Procedures and in CDF or DFG Incident Command System (ICS) training.⁴ Additional training, such as the U.S. Forest Service's Burned Area Emergency Treatment (BAER) Training System would be useful if training funds are available.

DFG STAFF TO BE TRAINED: Regional ES/wildlife/fisheries/plant ecology/botany staff responsible for carrying out fire policies and procedures; all regional supervisors, Regional Managers, Division Chiefs, HQ staff responsible for carrying out fire policies and procedures.

⁴ The most appropriate ICS training course(s) will be determined by DFG on a case-by-case basis and based on enrollment and funding availability.

C. POST-FIRE

1. Excerpt from Joint Board of Forestry-Fish and Game Commission Policy:

a. Joint Policy from the Board and Commission to their respective Departments

- 1) *Emergency watershed protection are those actions taken to assist in the recovery of the on-site vegetation and to protect downstream values of urban and wildland watersheds from excessive erosion and flooding following wildfire. These actions shall recognize the distinct differences between environmental impacts which are suppression-related and human-caused, and those which are wildfire-related and naturally occurring.***
- 2) *Program objectives shall be achieved by utilizing the Incident Command System (ICS) to obtain an evaluation of impacts to a watershed for fires occurring in areas of State Responsibility (SRA). This should be done in such a way to:***
 - i. *Keep damage to a minimum during mop-up;***
 - ii. *Have emergency watershed work initiated during the active suppression stage of the fire and have work completed shortly thereafter but before the first heavy rainfall.***
- 3) *Emergency revegetation shall be limited to critical areas as defined by the Departments and should consider long term ecosystem health and processes.***
- 4) *Mechanical methods of erosion control shall be considered during the evaluation of emergency watershed work. When revegetation actions are determined to be the most appropriate for the site, efforts shall consider enhancing natural plant recovery and succession. In determining the most appropriate watershed treatment, the long-term protection of the environment shall be evaluated along with the costs and benefits.***
- 5) *CDF has established a working group and policy task force, including DFG staff, to review the current watershed rehabilitation program and all available related information. The study, among other things, shall specify appropriate limits to where reseeded can occur and how it should be carried out. The study should be completed prior to the end of the next fire season and reports made to the Board and the Commission.***
- 6) *The Departments shall evaluate the effectiveness of their efforts in attaining the intent of this policy and report to the Board and Commission at their May meeting.***

b. Policy from the Commission to the Department of Fish and Game

- 1) *The Department shall participate in the development of rehabilitation/watershed work response plans.***
- 2) *The Department shall report to the Commission annually on the implementation of this policy, including any areas of disagreement with CDF.***

2. Department Post-Fire Policy:

Under the CDF ICS, EWP teams are established by the IC when the IC determines vegetation and watershed rehabilitation are necessary to protect the watershed, and lives and property downstream of burned areas.

When requested by CDF through the ICS, DFG will develop and recommend actions for post-fire EWP response. DFG will work with the EWP team to make technical assessments of the effects of fire and will make recommendations on the appropriate treatments involving biological recovery and rehabilitation.

DFG will make every reasonable effort to insure the protection and natural recovery of rare and sensitive elements of biotic diversity in fire zones. DFG will promote natural recovery without seeding except in situations where 1) risk to downstream property and life adjacent to impacted land is too great, and 2) probability of reducing erosion is high. DFG will cooperate with other EWP members from other agencies such as the CDF, Department of Conservation (Mines and Geology) and the Office of Emergency Services (OES) and with plant materials specialists [U.S.D.A. Natural Resources Conservation Service (NRCS)] to assure the most ecologically sound methods to prevent the potential loss of life and property.

DFG's policy on post-fire seeding to reduce erosion is as follows: Seeding is appropriate only if the following criteria are met: there is clear, scientific evidence that a given seeding mix will more effectively establish ground cover than the remaining, viable seeds in the natural seedbank, and 2), seeding has been demonstrated to be an effective restoration technique in relation to that specific incident's conditions (i.e. slope, soil-type, soil and duff damage, etc.). DFG believes that seeding may be appropriate in areas where fire suppression activity has removed or destroyed the natural seedbank (i.e. bulldozing). DFG acknowledges that when human safety is an issue downstream and seeding would protect human safety by better stabilizing an area, seeding is appropriate.

3. Procedures:

a. Role of DFG Technical Specialist in Post-fire Rehabilitation Assessment

Under the ICS, DFG's Technical Specialist will be responsible for making DFG recommendations for post-fire watershed and habitat rehabilitation. If the DFG Technical Specialist lacks the technical knowledge in any particular discipline, he or she should contact appropriate DFG regional or HQ staff prior to making assessments or recommendations to the EWP team leader.

Focus should be placed on four key areas:

- Evaluating any ecological damage from fire and fire suppression activities.
- Recommending to CDF management treatments that either minimize further impact to the affected habitat(s) or aid the habitat(s) in recovering naturally.
- Monitoring any impacts due to post-fire treatments and, as feasible, the natural recovery of plants and animals.
- Integrating data from monitoring into pre-fire and fire management plans.

b. Post-fire Assessment and Evaluation

1) Vegetation Assessment

- a) Post-fire vegetation assessment for the vegetation recovery evaluation should be performed by trained personnel. This evaluation should consider:
 - i. The impacts on the vegetation of fire intensity, past on-site fire frequency, and timing of fire.
 - ii. The impacts on the vegetation of fire suppression activities.
 - iii. The potential for natural recovery of vegetation:
 - aa. expansion or establishment of exotic species.
 - bb. expansion or establishment of undesirable native species.
 - cc. expansion or establishment of desirable native species.
- b) Prior to the on-site assessment, you may consult with DFG's Natural Diversity Data Base (NDDDB) concerning data on sensitive species and habitats and CDF's Strategic Planning Program (SPP) concerning data on fire history and site vegetation composition (from most recent detailed vegetation maps and associated local studies).

The pre-fire resource assessment (pages 5-9) for prescribed fire or fire-season planning may provide much of the necessary data.

- c) Based on assessments from team members, the DFG Technical Specialist may make recommendations to the EWP team leader that convey DFG's goals to primarily allow natural reestablishment of

vegetation to occur and secondarily to use mechanical methods, seeding, or a combination of both techniques to reduce erosion in selected areas (see POST-FIRE POLICY for DFG seeding policy statement).

- d) If seeding is deemed necessary, then the DFG Technical Specialist will meet with appropriate staff from CDF, NRCS, and seed suppliers to assess potential seed mixes to use.

The following factors are recommended for assessment:

- i. The availability of seed mixes.
 - ii. Matching the pre-fire vegetation (including early and late successional stages) and proportion of woody and herbaceous species.
 - iii. The site-specific appropriateness of available seed (hybridization or competition with natives, naturalization on non-natives).
 - iv. If no appropriate seed is available, seeding will not be recommended; erosion control recommendations will be based on non-vegetative techniques.
- e) Following implementation of erosion control using revegetation, monitoring of effectiveness of erosion control and success of revegetation and mechanical treatments will be undertaken.⁵

Results of monitoring will be sent to the DFG HQ Fire Ecologist and will be reviewed on an annual basis.

Encourage coordination with colleges and universities, and where available and appropriate, facilitate instructors and their students in assisting in monitoring projects.

- f) You may be asked to submit your technical recommendations to the EWP team leader in writing. Such reports should also be given to your supervisor and the HQ fire ecologist once your fire assignment has ended.

RESPONSIBLE DFG STAFF: DFG Technical Specialist, and when necessary, in consultation with Regional Plant Ecologist or Botanist, DFG HQ Fire Ecologist (when hired), or DFG NDDB Vegetation Ecologist.

⁵ Current knowledge suggests that monitoring for the effects of seeding should occur for at least 5 years. However, neither DFG nor CDF have sufficient funding and staffing to allow for such monitoring. Consequently, the EWP team will have to establish the best monitoring regime allowed by available agency resources.

2) Sensitive Species and Natural Communities Assessment

DFG may make an assessment of sensitive elements of biodiversity known or suspected from within the fire zone (species and communities). A RareFind search of DFG's NDDB for elements in the fire zone for each major fire (determined by size and knowledge of concentration of sensitive elements in area) will be made.

In addition, other sensitive elements known from the area (e.g., those important plants, animals, or communities not listed in Rarefind, but known from the area) should be included in the assessment. If the fire has a significant impact (judged by known or assumed adverse effects of fire on the specific elements ranked as rarest in Rarefind), assessment may include a field investigation.

The following are recommended:

- a) Specifically locate rare elements on maps of the area. If possible use NHD GIS as an aid (In the future, this may be done by regional GIS stations or from ARCVIEW link to personal computers in the Regions).
- b) When a field assessment is necessary, be familiar with the local ecology of the plants, animals, and natural communities in question, their resiliency to fire, and identify any likely negative effects of fire.
- c) During the EWP team's assessment, provide specific locations for sensitive species within the fire perimeter and note potential negative effects.
- d) During post-fire management planning, state the specific effects to and recommended rehabilitation or treatment for these sensitive species and habitats. Differing opinions may be discussed, and justifications for final recommendations to the IC should be documented.

RESPONSIBLE DFG STAFF: DFG Technical Specialist, and when necessary, in consultation with Regional Plant Ecologist or Botanist, Regional Biologists, NDDB and HQ GIS staff if rush-products are necessary for location information.

3) Role of DFG NDDB and GIS units:

Upon notification by the DFG Technical Specialist or the EWP team leader, DFG NDDB and GIS staff will map and research sensitive and significant biological resources tracked by NDDB and other DFG programs for a fire area. These include all available data in NDDB files that do not occur on

existing GIS layers, and may include other information mapped or provided by Wildlife Management Division (e.g., deer winter range), or Oil Spill Prevention and Response. Some of this information may already exist as a result of pre-fire season planning.

Natural Diversity Data Base
Natural Heritage Division
1220 S Street
Sacramento
(916) 327-0712 or 322-2493
Contact: NDDB Supervisor

- a) DFG GIS may produce maps depicting all occurrences; ancillary file data may be copied and sent to DFG regional personnel within 24 hours of CDF's request.

CDF's SPP GIS unit already operates under the ICS for fires. DFG will, when asked, provide the SPP with the biological resource layers to overlay with fire footprint layer as soon as possible.

DFG GIS may act as the back-up for SPP for producing maps. When DFG GIS is asked to take on role of printing the maps, SPP will provide DFG with the fire footprint layer.

If and when regional GIS and NDDB data become available, the above procedure may be modified to allow for the most expedient delivery of information to field staff making assessments.

- b) The DFG GIS unit will be made available for producing custom mapping products for the DFG Technical Specialist.

4) Reporting on EWP response:

In your reports to the EWP team leader, your DFG supervisor, and the DFG HQ Fire Ecologist, you should state the specific effects to and recommended management for 1) vegetation communities, 2) watersheds with important biological resources, and 3) sensitive plants, animals, and natural communities.

If your recommendations are different than those the EWP team leader makes to the IC, you should concisely document the following:

- a) Your specific recommendations and justifications and which team members concurred with your assessment.
- b) Other team member's differing recommendations and the justifications.
- c) How final recommendations were achieved.

- d) Your critique of the final recommendations and the potential effects on the various biological resources.

4. Training:

As funding and time are available, all identified responsible DFG staff will receive training in specific methodologies of fire effect assessment. Training should include:

- a. Appropriate and successful communication and team skills needed for ICS and EWP response.
- b. Basic ecological monitoring techniques.
- c. Knowledge and methods to identify signs of fire intensity, post-fire vegetation remnant species identification, predicting the recovery potential of affected vegetation.
- d. Fire effect on terrestrial wildlife.
- e. Fire effects to watersheds and aquatic wildlife.
- f. Writing of the post-fire management reports.
- g. U.S. Forest Service's Burned Area Emergency Treatment (BAER) Course.

STAFF TO RECEIVE TRAINING: All identified Regional and HQ staff that may function as Technical Specialists and other staff responsible for post-fire consultations (Environmental Specialists, Fire and Plant Ecologists, Wildlife and Inland Fisheries Biologists); Regional Supervisors, Regional Managers, Division Chiefs.

NDDB and GIS staff need training in (a).

Appendix I. Board of Forestry-Fish and Game Commission Interim Joint Policy on Pre-fire, During, and Post-Fire Activities and Wildlife Habitat

PRE-FIRE

I. INTRODUCTION

- A.** In California, fuel loads are very high. It is known that hot wildfires can do great damage to habitat. Pre-fire activities such as vegetation management activities, including both prescribed burning and mechanical approaches, are designed to reduce high fuel loads and in other ways reduce the risk of wildfire. Compared to the damage from uncontrolled wildfire, it is advantageous to use prescribed, more controlled, fires or mechanical methods whenever appropriate. In many places wildlife habitat is already badly fragmented. Accordingly, each unique plant community may have different fire cycles and respond according to appropriately timed prescribed burns. Hence there are conditions under which prescribed fires may be more desirable and other conditions under which such fires may have undesirable effects on plant communities. Within this framework, evaluations should be based on available data, supplemented to the extent feasible with site-specific information and analysis developed within a time frame necessary to carry out vegetation management objectives.
- B.** Complex habitat interrelationships make pre-fire species-by-species analysis inefficient and costly. Project-by-project analysis is also expensive and inefficient given wildlife dependence on specific ecosystems that cover larger areas and themselves are spatially interrelated and often fragmented. Within this framework, evaluations of agency pre-fire programs should be made at the largest geographical scale possible to deal with ecosystem and wildlife interrelationships while taking into account sensitive habitats and species.
- C.** The fundamental problem complicating effective fire protection in California is the existing and rapidly growing linear distance of the developed/wildland interface within a fire prone ecosystem. This represents a logistical challenge for state and local fire agencies and is also an issue in managing wildland ecosystems to be self-sustaining. Consequently, it is critical that fire protection, including fire prevention, requirements be addressed at the earliest stage feasible in both development planning and in the design and maintenance of wildlife reserves. This should be done through the local community planning process with multi-disciplinary representation.
- D.** Vegetation clearance near residences reduces damage to habitat from fires which originate near the residence. It also provides a defensible space from which to protect residences from wildfires burning from adjacent wildland areas. Hence Public Resources Code Section 4291 requires clearance of up to 100 feet around homes and fire safe regulations emphasize the use of fuel breaks. However, clearance may damage small portions of habitat, such as fragile areas like riparian zones, nesting sites, and rare plant populations. Provision for clearance should be

made as part of subdivision or reserve design consistent with state laws and local ordinances. For existing homes, clearance may be an essential part of a fire safe strategy and must be completed, giving care to avoiding, reducing, or mitigating adverse impacts on sensitive plant and wildlife communities.

- E. Fire breaks, and to a lesser extent fuel breaks, may exacerbate the fragmentation of sensitive habitat, depending on the location, size, and number of breaks, as well as the method of clearance (i.e. discing, mowing, blading, etc.).

II. JOINT POLICY FROM BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. The Department of Forestry and Fire Protection (CDF) has established a working group and policy task force to review the current vegetation management program; the Department of Fish and Game (DFG) is participating. This review should be completed by late summer and a report should be submitted to the Board and Commission. Until CDF and DFG report to the Board and Commission, the Departments shall follow the Board's existing Vegetation Management Policy.
- B. Consistent with this policy, for 1994 and 1995 the Departments shall complete as many vegetation management activities as possible on the urban interface, especially in Southern California. CDF and DFG should facilitate such projects on the highest priority. The Departments shall coordinate existing data and surveys, consult as appropriate with federal wildlife agencies, and assign additional staff as needed to facilitate completion of this task. To the extent feasible given staff, funds, fire season dates, and program time frames, the Departments should seek to obtain additional biological data needed to fill information gaps; however, this charge should not delay implementation of an aggressive vegetation management program.
- C. For 1996 and beyond, the Departments shall develop or update a joint (CDF, DFG, and other agencies) five year vegetation management program that delineates proposed activities for this time frame consistent with the goals in the Board of Forestry Fire Plan. This process shall: 1) encourage early consultation between fire management agencies and other wildlife agencies; 2) identify all areas that may be candidates for prescribed fire or other pre-fire activities; and 3) assess the resources at stake and the anticipated effect of pre-fire activities.
- D. The Departments shall aggressively seek to incorporate fire protection requirements for both development and wildlife reserve planning. The Departments should coordinate such efforts and seek to have fire protection issues addressed at the earliest planning stage possible, including integrated planning for management of wildlife habitat and defensible space.
- E. Consistent with their statutory mandates, the Departments shall support enforcement of clearance laws and recognize that property owners are legally required to provide clearance around structures as specified in Section 4291 of the Public Resources Code; and that communities in high fire hazard areas need to

have an aggressive fire safe program, including clearance and fuel breaks around existing structures. The Departments shall aggressively seek to involve the private sector in assuming greater responsibility for fire prevention.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. Prior to the start of fire season, DFG shall meet with and keep CDF informed at the regional level regarding the location of important plant and animal communities and their related ecosystems. To the extent that resources permit, the Department shall provide information regarding the location of the plant and animal communities and related ecosystems. The Department shall report to the Commission at its May meeting on the outcome of the sessions, including any issues that could not be resolved.**

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. Prior to the start of fire season, CDF shall meet with DFG at the regional level and keep them informed of the status of the upcoming fire season, the location of areas where fire hazards are especially great, the availability of fire fighting personnel, and other relevant factors. To the extent feasible, CDF shall incorporate the information into the dispatch and Incident Command System planning information bases and make certain that regional personnel are familiar with this information and its application to suppression activities. The Department shall report to the Board at its May meeting on the outcome of the sessions, including any issues that could not be resolved.**

DURING FIRE

I. INTRODUCTION

- A. Some ecosystems are very fragile to intense fires, such as a backfire at the wrong period of the year, or to mechanical disturbance which may increase erosional events or irreparably damage the habitat integrity. The greatest ability to be sensitive to habitat impacts is in pre-suppression activities. After a fire starts and increases in size and intensity, options usually decrease. After a fire is contained, options may again increase.**

II. JOINT POLICY OF THE BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. When there is a conflict between protecting human life and other values, human life should receive top priority. Protection of property, habitat of sensitive, threatened, and endangered species, timber, and watershed values should receive careful consideration in choice of suppression tactics from an integrated values at risk approach consistent with the Board's Fire Plan. The Departments shall work**

together to facilitate this direction and shall report annually to the Board and Commission on operation of this policy.

- B. The Departments shall jointly evaluate during fire activities and report to the Board and Commission at their January meetings.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. As part of the Incident Command System (ICS), the Department shall make available a local plant, wildlife, and fisheries specialist during wildland fires or on burns that threaten important wildlife or plant communities to provide advice.
- B. The Department shall train appropriate regional personnel in use of the Incident Command System and periodically renew this training.
- C. The Department shall work with CDF to identify fire suppression tactics on wildfires that could have long term effects on ecosystems at the regional or local level.

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. On fires that have the potential to become major fires, CDF's ICS structure shall involve DFG and others as Technical Specialists to advise the planning section regarding sensitive habitat. In the event that DFG cannot provide appropriate specialists, CDF shall seek alternative specialists as necessary to deal with concerns related to plants, fish, and wildlife.
- B. Sensitivity should be taken with fire suppression tactics in some ecosystems, where such activities could harm the long term maintenance of the plant or animal communities. CDF incident commanders shall be aware of and consider the impacts of practices listed by DFG as having potential long term effects on ecosystems.

POST-FIRE

INTRODUCTION

- A. By law, revegetation efforts following wildfire focus on rehabilitating watershed lands to conserve water and soil and to prevent destructive floods. Historically, flood related erosional events have been a major issue. Recent studies suggest that seeding with rye grass may not be particularly effective in slowing erosion, at least in some sites and in some places in California. Seeding with native grasses from outside the local area of the burn has raised questions about contamination of local gene pools. Native grasses may also be more persistent than rye grass and prevent the recovery of the on-site vegetation species; these factors could be especially important in critical wildlife habitat areas. Emergency revegetation

work may be necessary, but should be evaluated site-by-site. Cost of native grass seed is a significant factor to be examined. Mechanical and structural methods shall also be considered as they may be an effective and cost efficient way of dealing with erosion control and be less damaging to the ecosystem.

- B. Under Sections 4675 and 4676 of the Public Resources Code the CDF is authorized to perform specified acts to protect the public interest, including activities related to watershed rehabilitation. Under the California Environmental Quality Act and various Fish and Game Code sections, DFG is charged with protection of fish and wildlife and related habitat, including viability of habitat following wildfire.

II. JOINT POLICY FROM THE BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. Emergency watershed protection are those actions taken to assist in the recovery of the on-site vegetation and to protect downstream values of urban and wildland watersheds from excessive erosion and flooding following wildfire. These actions shall recognize the distinct differences between environmental impacts which are suppression-related and human-caused, and those which are wildfire-related and naturally occurring.
- B. Program objectives shall be achieved by utilizing the Incident Command System (ICS) to obtain an evaluation of impacts to a watershed for fires occurring in areas of State Responsibility (SRA). This should be done in such a way to:
 - 1. Keep damage to a minimum during mop-up;
 - 2. Have emergency watershed work initiated during the active suppression stage of the fire and have work completed shortly thereafter but before the first heavy rainfall.
- C. Emergency revegetation shall be limited to critical areas as defined by the Departments and should consider long term ecosystem health and processes.
- D. Mechanical methods of erosion control shall be considered during the evaluation of emergency watershed work. When revegetation actions are determined to be the most appropriate for the site, efforts shall consider enhancing natural plant recovery and succession. In determining the most appropriate watershed treatment, the long-term protection of the environment shall be evaluated along with the costs and benefits.
- E. CDF has established a working group and policy task force, including DFG staff, to review the current watershed rehabilitation program and all available related information. The study, among other things, shall specify appropriate limits to where reseeding can occur and how it should be carried out. The study should be completed prior to the end of the next fire season and reports made to the Board and the Commission.

- F. The Departments shall evaluate the effectiveness of their efforts in attaining the intent of this policy and report to the Board and Commission at their May meeting.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. The Department shall participate in the development of rehabilitation/watershed work response plans.
- B. The Department shall report to the Commission annually on the implementation of this policy, including any areas of disagreement with CDF.

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. Until the Department completes its study, CDF's current policies shall apply.
- B. The Department shall report annually to the Board on the implementation of this policy, including any areas of disagreement with DFG.
- C. CDF staff shall advise DFG of rehabilitation efforts and request appropriate staff to participate.

Appendix II. Definition and Description of Monitoring⁶

Definition of Monitoring

MacDonald et al. (1991) defines monitoring as to watch or check. The term implies that a series of observations will be taken over time. This repetition of measurements over time for the purpose of detecting change distinguishes monitoring from inventory and assessment. The overlap in definitions of assessment, inventory, and monitoring means that in some cases the primary distinguishing feature of monitoring will be the intent to assess change rather than the number or type of measurements.

Baseline Monitoring

This is probably synonymous with inventory monitoring or assessment monitoring. Baseline monitoring is used to characterize existing conditions, and to establish a data base for planning or future comparisons. The intent of baseline monitoring is to capture much of the temporal variation of the parameter of interest, but there is no explicit end point at which continued baseline monitoring becomes trend monitoring (MacDonald et al. 1991). Examples of how such information would be used are as follows:

- What was the pre-fire condition of the vegetation?
- What was the pre-fire wildlife abundance and distribution?

Trend Monitoring

This type of monitoring implies that measurements will be made at regular, well-spaced time intervals in order to determine the long-term trend in a particular parameter. Typically the observations are not taken specifically to evaluate management practices, activities, or models, but data may be used for one or all of these purposes (MacDonald et al. 1991). This is the same as collecting data for indices. For example:

- What was the average cover and density of vegetation in the last 10 years?
- What was the average density of California gnatcatchers in the last 10 years?

⁶ Originally printed in memorandum from Mr. Marty Berbach, Associate Wildlife Biologist, CDF, to Mr. Kevin Shaffer, DFG, on March 18, 1994.

Some of the questions submitted by Team members fall into this type of monitoring.

Validation (Research) Monitoring

Validation monitoring provides information to determine if the key underlying assumptions in the management strategy are correct. It can be the quantitative evaluation of a proposed model to predict a particular parameter (MacDonald et al. 1991). Validation monitoring is extremely important because it tells if a change in the strategy is necessary and what type of change might be appropriate. Without validation monitoring, it is possible to know that a change is needed, but to not know what type of change is appropriate. Validation monitoring clearly represents a blend of scientific research and monitoring and is successful only when aimed at specific management questions (Lujan et al. 1992, Ruth and Standiford 1994). Validation monitoring may include long-term research (5-10 years or more). For example:

- Under what conditions, if any, does post-fire re-seeding significantly reduce erosion?
- What affects, if any, does post-fire re-seeding have on the recovery of the natural vegetation?

Many of the questions submitted by Team members fall into this type of monitoring.

The various types of monitoring presented here are not mutually exclusive. The distinction between them should be determined by the purpose of monitoring than by type and intensity of measurements (MacDonald et al. 1991). I think it is important for the Team to focus on the type of monitoring they want done, and perhaps stratify the type of monitoring depending on the situation. The limiting factors, of course, are time and resources.

Literature Cited

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Appendix III. California Department of Forestry and Fire Protection Procedures for Resource Ordering of DFG Personnel for Fire Incidents

PROCEDURE NO. 011.A

**SUBJECT: Resource Ordering - Dept. of Fish and Game Personnel
Mandatory Notifications**

Background: The Board of Forestry and the Fish and Game Commission have recognized that coordination between CDF and DFG is necessary for successful fire suppression and ecosystem protection. In the spring of 1994, the Board and Commission adopted a interim joint policy for involvement by DFG personnel in pre-fire, fire suppression, and post-fire activities for the protection of wildlife habitat.

There are several aspects involved in the coordination in this effort. This procedure has been developed to allow for appropriate DFG involvement while minimizing adverse impact to fire suppression operations.

DFG Response to Fires: The following conditions require notification to DFG:

1. Any time a Ranger Unit experiences an "extended attack" or "major" fire. ("Extended Attack" means the fire can be contained within the first burning period but requires substantial augmentation. "Major" means fire cannot be contained within the first burning period even with substantial augmentation of resources, and long-term resource commitment and logistical support is required. See HB 7700, sec. 7751.1)
2. Any time the CDF Incident Commander (IC) believes the fire is of a magnitude or intensity that DFG participation would benefit the enhancement of the wildlife resource or the State's response requirements. This could occur even during the initial attack stage. Examples of such situations are:
 - A. The wildfire is on or approaching DFG owned or managed lands, if known to the IC.
 - B. The IC is assigning an Emergency Watershed Protection (EWP) team.
 - C. The wildfire is occurring in sensitive wildlife habitat, i.e., endangered species, riparian, vernal pools, etc., known to the IC.

Role of the DFG Response Personnel: Typically, the DFG person responding to the CDF notification will fit into the Incident Command System as a DFG agency representative or a wildlife habitat Technical Specialist and will normally be in the classification of a Wildlife Biologist.

- D. The DFG representative will provide recommendations and advice to the IC on the wildlife resources in the fire area and any adverse impact that the fire tactics might have on those resources. This information will become additional factors that may affect fire strategy and tactical decision-making.

PROCEDURE NO. 011.A (continued)

**SUBJECT: Resource Ordering - Dept. of Fish and Game Personnel
Mandatory Notifications**

The DFG Wildlife Biologist assigned to the incident will be aware that the CDF IC has the ultimate decision on wildfire suppression strategy and tactics. If differences of opinion arise at the fire scene, they will be documented and reviewed by CDF and DFG program personnel at a later time or date.

Resource Ordering Procedure:

Responsibility	<u>Action</u>
ECC	<ol style="list-style-type: none">1. Record the request for DFG notification on FC-101 or enter in CALCAD.2. Place orders with the following number:<ol style="list-style-type: none">A. 24-hour Emergency Incident Department (DFG) dispatcher:<ul style="list-style-type: none">• (916) 445-0045 •B. At some time following CDF notification to DFG the Dispatcher will call back the ordering ECC and confirm that the order was filled and provide the necessary personnel information to the CDF dispatcher.

**Appendix IV. California Department of Fish and Game FIRE RESPONSE INFORMATION
FORM-A Revised July 1995**

Please fill out the entire form. Return one copy to your supervisor, one copy to the Department Fire Ecologist, and keep one copy for yourself.

1 Staff Information

Name:

Classification:

Region (circle one): 1 2 3 4 5

Address:

Phone #: ()

2. Incident Contact Information (circle all appropriate choices)

Date and Time of initial contact:

Were you initially contacted by:⁷

a) DFG Dispatch

b) DFG Supervisor:

c) CDF:

d) Other:

What information were you given (check and, where appropriate, fill in):

a) CDF Request Number _____

b) CDF Incident Number _____

c) Location of Fire _____

d) Directions of Fire _____

e) Current Fire Condition _____

f) CDF Contact Person _____

g) Other: _____

Indicate whether you responded to an official DFG-CDG ICS dispatch.

Implementation and Compliance Monitoring

This is monitoring of management and planning to insure that plans are carried out as initially intended. This type of monitoring determines whether implementing mechanisms are operating correctly and provides the basis for administrative oversight (Lujan et al. 1992, Ruth and Standiford 1994). Typically this is carried out as an administrative review and does not involve any quantitative measurements (MacDonald et al. 1991). It checks the ability of responsible entities to implement policies or legal requirements as a result of the Post-fire Monitoring Team recommendations, the Board of Forestry and Fish and Game Commission joint policy, or regulation. It is necessary to know that a strategy or procedure was implemented correctly before effectiveness or validation monitoring can be meaningful. Examples of some simple implementation and compliance questions follows:

- Did Dept. of Forestry (CDF) and Dept of Fish and Game (DFG) follow the policies of the Board of Forestry and the Fish and Game Commission and meet their statutory responsibilities?
- Were mitigations developed by the Post-fire Monitoring Team under the Incident Command System properly put in place?
- Were the monitoring guidelines set by the Post-fire Monitoring Team implemented?
- Were post-fire monitoring designs set up correctly after Emergency Watershed Protection measures (e.g., re-seeding) were taken?

This type of monitoring may be beyond the scope of the Post-fire Monitoring Team, but the agencies should plan to do it in some fashion.

Effectiveness Monitoring

To minimize confusion, effectiveness monitoring is used here in the narrow sense of evaluating individual management practices (MacDonald et al. 1991). Effectiveness monitoring provides the basis for determining if the primary effects predicted for the management strategy worked. It provides the basis for deciding if some change is needed should the management strategy produce outcomes different from predictions (Lujan et al. 1992, Ruth and Standiford 1994). This type of monitoring may determine cause and effect, or significant correlations, without determining the underlying mechanisms. This type of monitoring may be adequate for agencies to make management decisions. For example:

- Did post-fire re-seeding significantly reduce erosion?
- Did post-fire re-seeding affect native plant recovery?

3. Fire Incident Information:

Date and Time of Reporting to CDF: _____

Were you asked to complete any paperwork? (circle one) No Yes. If yes, explain:

Initial and Subsequent CDF Contacts:

a) Initial:

b) Subsequent:

Information given to you by CDF:

4. Emergency Watershed Protection (EWP) Response: (circle Y or N)

Was an EWP team formed? N Y

Were you assigned to the EWP team? N Y

Who was the EWP team leader?

Information given to you during EWP process:

Information requested of you during EWP process:

5. Termination of your responsibilities in Fire Incident

Date and Time when you were released from your fire duties:

Who released you from your duties?

Were you asked to complete any paperwork? (circle one) N Y If yes, explain:

Were you given information about reimbursement for: (circle all appropriate choices)

- a) Overtime
- b) Travel
- c) Per diem
- d) Other:

Did you write any reports or analysis? (circle all appropriate choices) N Y If yes, did you give copies to:

- a) Your Supervisor
- b) CDF
- c) NHD
- d) Other:

6. Your thoughts about your involvement and any recommendations:
(please limit your comments to this sheet)

Appendix V. SECTION 679, TITLE 14, CCR: Possession of Wildlife and Wildlife Rehabilitation

679. Possession of Wildlife and Wildlife Rehabilitation.

(a) **General Prohibition on Possession of Wildlife.** Except as provided in subsection (b) below or as otherwise authorized, it is unlawful for any person to possess any live game mammal or bird, nongame mammal or bird, furbearer, reptile or amphibian.

(b) **Temporary Confinement of Wildlife.** Except for big game mammals listed in Section 350, Title 14, CCR, injured, diseased or orphaned animals may be temporarily confined by persons if they notify the nearest regional office of the department within forty-eight (48) hours of finding or confining such wildlife. Notification shall include name and address; the species of wildlife and a description of its injury, disease or condition; the date and location the wildlife was found; and the location where the wildlife is confined. Confined animals must be disposed of pursuant to department direction, including placement in a department-approved wildlife rehabilitation facility. (Department offices: Region 1 (Redding), (916) 225-2300, Region 2 (Rancho Cordova), (916) 355-0978, Region 3 (Yountville), (707) 944-5500, Region 4 (Fresno), (209) 222-3761, Region 5 (Long Beach), (310) 590-5132)

(c) **Prohibition on Possession of Big Game Mammals or Fully Protected, Threatened or Endangered Species Except Under Department Permit.** No person or wildlife rehabilitation facility may possess any big game mammal listed in Section 350, Title 14, CCR, or any fully protected, endangered or threatened bird, mammal, fish, reptile or amphibian without specific written authorization from the department.

(d) **Prohibition on Picking up Disabled Wildlife in a Department Designated Oil/Toxic Spill Area.** No person may enter a department designated oil/toxic spill area for the purpose of picking up disabled wildlife or transport or possess wildlife disabled by an oil spill or other spilled toxic substance unless that person has completed the training required by subsections 817.02(i) and (j), Title 14, CCR, and has authorization from the department. Designated oil/spill areas shall be clearly posted by the department.

(e) **Wildlife Rehabilitation Facilities.**

(1) **Wildlife Rehabilitation Facility Defined.** For the purposes of these regulations, a wildlife rehabilitation facility is defined as a site where activities are undertaken to restore to a condition of good health, for the purpose of release to the wild, animals occurring naturally and not normally domesticated in this state.

(2) **Approval of Wildlife Rehabilitation Facility.** The department may approve and issue a permit in the form of a Memorandum of Understanding to only those wildlife rehabilitation facilities which meet the wildlife care standards set forth in the 1993 Wildlife Rehabilitation Minimum Standards and Accreditation Program manual published jointly by the International Wildlife Rehabilitation Council and the National Wildlife Rehabilitators Association. The above wildlife care standards are hereby adopted and made a part of this Title 14 and shall be included as part of DEPARTMENT OF FISH AND GAME MANUAL 679 (5/94) - WILDLIFE REHABILITATION AND CARE STANDARDS, which is incorporated by reference herein. This manual shall be made available to all permittees and other interested individuals. Existing wildlife rehabilitation facilities not meeting these standards will not be permitted to rehabilitate wildlife after June 6, 1997. New facilities must comply with the standards upon the effective date of these regulations.

(f) **Provisions Related to the Operation of a Wildlife Rehabilitation Facility.**

(1) Responsibility for Costs Incurred. The operator of a wildlife rehabilitation facility shall be responsible for any and all costs incurred in connection with the treatment, confinement or transportation of wildlife.

(2) Liability. The operator of a wildlife rehabilitation facility shall indemnify, defend and save harmless the State, its officers, agents, and employees from any and all claims and losses occurring or resulting to any person or property in connection with the treatment, confinement or transportation of wildlife.

(3) Restrictions Related to Holding Wildlife. Wildlife temporarily held for rehabilitation must be maintained separate from facilities housing domestic animals and shall not be displayed to the public. Such wildlife shall have minimal direct human contact. Every effort shall be made to prevent imprinting.

(4) Department Approval Requirement for Release of Wildlife Back into the Wild. Rehabilitated wildlife may be released back into the wild only as directed by the department. All mammals and raptors shall be marked with bands or tags provided by the department (see "BANDING, TAGGING, MARKING" in Wildlife Rehabilitation and Care Standards Manual.) If any animal cannot be released, it shall be transferred to a zoological garden, museum, college, university or other educational/research institution or wildlife exhibitor. If it cannot be released or transferred, it shall be humanely euthanized. These regulations do not authorize any person, facility or organization to accept, possess or relocate nuisance wildlife. Any healthy wildlife trapped in towns or cities or removed from under buildings or otherwise taken or trapped as nuisance wildlife. Such wildlife shall be immediately released back to the wild or disposed of as directed or authorized by the department. Any such wildlife that has been determined by a veterinarian to be so seriously ill that it cannot be treated shall be euthanized and tested as directed by the appropriate county public health agency or the department.

(5) Notification Requirement for Dead or Diseased Animals. The operator of a wildlife rehabilitation facility shall notify the nearest department region office within twenty-four (24) hours if any animal dies of a disease specified in the facility's permit or is suspected to have died from one of those diseases and shall make the dead animal available for delivery to the department or other facility as directed by the department.

(6) Written Record Requirement. The operator of a wildlife rehabilitation facility shall maintain a written record for each animal being cared for. This record shall include the name and address of the person finding the animal, the location where the animal was found, a description of its condition and treatment, the dates it was received and transferred from the facility and the location of its final disposition.

(7) Availability of Records. The operator of a wildlife rehabilitation facility shall make all records, wildlife being rehabilitated and any materials used for the confinement, treatment, or care of wildlife, available for inspection by department employees or employees of the Department of Food and Agriculture or Department of Health Services or any other person authorized to enforce these regulations.

(g) Compliance With Other Restrictions. These regulations, or any permit issued pursuant thereto, do not authorize possession of any wild animal in violation of any other Federal, state, city, or county law, ordinance or regulation, including but not limited to any California Department of Health Services Rabies Control regulations.

NOTE Authority cited: Sections 200, 2000, 3005.5, 3800 and 4150, Fish and Game Code. Reference: Sec. 200, 1008, 2000, 2001, 3005.5, 3511, 3800, 4150, 4190 and 4800, Fish and Game Code, and Sec. 8670.8, 8670.8.5 and 8674.7, Government Code.

Appendix Form FC-33: Overhead Crew Equipment Report.

INTERIM JOINT POLICY ON PRE, DURING, AND POST FIRE ACTIVITIES AND WILDLIFE HABITAT

PREFIRE

I. INTRODUCTION

- A. In California, fuel loads are very high. It is known that hot wildfires can do great damage to habitat. Prefire activities such as vegetation management activities, including both prescribed burning and mechanical approaches, are designed to reduce high fuel loads and in other ways reduce the risk of wildfire. Compared to the damage from uncontrolled wildfire, it is advantageous to use prescribed, more controlled, fires or mechanical methods whenever appropriate. In many places wildlife habitat is already badly fragmented. Accordingly, each unique plant community may have different fire cycles and respond according to appropriately timed prescribed burns. Hence there are conditions under which prescribed fires may be more desirable and other conditions under which such fires may have undesirable effects on plant communities. Within this framework, evaluations should be based on available data, supplemented to the extent feasible with site-specific information and analysis developed within a time frame necessary to carry out vegetation management objectives.
- B. Complex habitat interrelationships make prefire species-by-species analysis inefficient and costly. Project-by-project analysis is also expensive and inefficient given wildlife dependence on specific ecosystems that cover larger areas and themselves are spatially interrelated and often fragmented. Within this framework, evaluations of agency prefire programs should be made at the largest geographical scale possible to deal with ecosystem and wildlife interrelationships while taking into account sensitive habitats and species.
- C. The fundamental problem complicating effective fire protection in California is the existing and rapidly growing linear distance of the developed/wildland interface within a fire prone ecosystem. This represents a logistical challenge for state and local fire agencies and is also an issue in managing wildland ecosystems to be self-sustaining. Consequently, it is critical that fire protection, including fire prevention, requirements be addressed at the earliest stage feasible in both development planning and in the design and maintenance of wildlife reserves. This should be done through the local community planning process with multidisciplinary representation.
- D. Vegetation clearance near residences reduces damage to habitat from fires which originate near the residence. It also provides a defensible space from which to protect residences from wildfires burning from adjacent wildland areas. Hence Public Resources Code Section 4291 requires clearance of up to 100 feet around homes and fire safe regulations emphasize the use of fuel breaks. However, clearance may damage small portions of habitat, such as fragile areas like riparian zones, nesting sites, and rare plant populations. Provision for clearance should be made as part of subdivision or reserve design consistent with state laws

and local ordinances. For existing homes, clearance may be an essential part of a fire safe strategy and must be completed, giving care to avoiding, reducing, or mitigating adverse impacts on sensitive plant and wildlife communities.

- E. Fire breaks, and to a lesser extent fuel breaks, may exacerbate the fragmentation of sensitive habitat, depending on the location, size, and number of breaks, as well as the method of clearance (i.e., discing, mowing, blading, etc.).

II. JOINT POLICY FROM BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. The Department of Forestry and Fire Protection (CDF) has established a working group and policy task force to review the current vegetation management program; the Department of Fish and Game (DFG) is participating. This review should be completed by late summer and a report should be submitted to the Board and Commission. Until CDF and DFG report to the Board and Commission, the Departments shall follow the Board's existing Vegetation Management Policy.
- B. Consistent with this policy, for 1994 and 1995 the Departments shall complete as many vegetation management activities as possible on the urban interface, especially in Southern California. CDF and DFG should facilitate such projects on the highest priority. The Departments shall coordinate existing data and surveys, consult as appropriate with federal wildlife agencies, and assign additional staff as needed to facilitate completion of this task. To the extent feasible given staff, funds, fire season dates, and program time frames, the Departments should seek to obtain additional biological data needed to fill information gaps; however, this charge should not delay implementation of an aggressive vegetation management program.
- C. For 1996 and beyond, the Departments shall develop or update a joint (CDF, DFG, and other agencies) five year vegetation management program that delineates proposed activities for this time frame consistent with the goals in the Board of Forestry Fire Plan. This process shall: 1) encourage early consultation between fire management agencies and other wildlife agencies; 2) identify all areas that may be candidates for prescribed fire or other pre-fire activities; and 3) assess the resources at stake and the anticipated effect of prefire activities.
- D. The Departments shall aggressively seek to incorporate fire protection requirements for both development and wildlife reserve planning. The Departments should coordinate such efforts and seek to have fire protection issues addressed at the earliest planning stage possible, including integrated planning for management of wildlife habitat and defensible space.
- E. Consistent with their statutory mandates, the Departments shall support enforcement of clearance laws and recognize that property owners are legally required to provide clearance around structures as specified in Section 4291 of the Public Resources Code; and that communities in high fire hazard areas need to have an aggressive fire safe program, including clearance and fuel breaks around existing structures. The Departments shall aggressively seek to involve the private sector in assuming greater responsibility for fire prevention.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. Prior to the start of fire season, DFG shall meet with and keep CDF informed at the regional level regarding the location of important plant and animal communities and their related ecosystems. To the extent that resources permit, the Department shall provide information regarding the location of the plant and animal communities and related ecosystems. The Department shall report to the Commission at its May meeting on the outcome of the sessions, including any issues that could not be resolved.

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. Prior to the start of fire season, CDF shall meet with DFG at the regional level and keep them informed of the status of the upcoming fire season, the location of areas where fire hazards are especially great, the availability of fire fighting personnel, and other relevant factors. To the extent feasible, CDF shall incorporate the information into the dispatch and Incident Command System planning information bases and make certain that field personnel are familiar with this information and its application to suppression activities. The Department shall report to the Board at its May meeting on the outcome of the sessions, including any issues that could not be resolved.

DURING FIRE

I. INTRODUCTION

- A. Some ecosystems are very fragile to intense fires, such as a backfire at the wrong period of the year, or to mechanical disturbance which may increase erosional events or irreparably damage the habitat integrity. The greatest ability to be sensitive to habitat impacts is in suppression activities. After a fire starts and increases in size and intensity, options usually decrease. After a fire is contained, options may again increase.

II. JOINT POLICY OF THE BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. When there is a conflict between protecting human life and other values, human life should receive top priority. Protection of property, habitat of sensitive, threatened, and endangered species, timber, and watershed values should receive careful consideration in choice of suppression tactics from an integrated values at risk approach consistent with the Board's Fire Plan. The Departments shall work together to facilitate this direction and shall report annually to the Board and Commission on operation of this policy.
- B. The Departments shall jointly evaluate during fire activities and report to the Board and Commission at their January meetings.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. As part of the Incident Command System (ICS), the Department shall make available a local plant, wildlife, and fisheries specialist during large fires or on burns that threaten important wildlife or plant communities to provide advice.
- B. The Department shall train appropriate field personnel in use of the Incident Command System and periodically renew this training.

- C. The Department shall work with CDF to identify fire suppression tactics on wildfires that could have long term effects on ecosystems at the regional or local level.

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. On fires that have the potential to become major fires, CDF's ICS structure shall involve DFG and others as technical specialists to advise the planning section regarding sensitive habitat. In the event that DFG cannot provide appropriate specialists, CDF shall seek alternative specialists as necessary to deal with concerns related to plants, fish, and wildlife.
- B. Sensitivity should be taken with fire suppression tactics in some ecosystems, where such activities could harm the long term maintenance of the plant or animal communities. CDF incident commanders shall be aware of and consider the impacts of practices listed by DFG as having potential long term effects on ecosystems.

POST FIRE

I. INTRODUCTION

- A. By law, revegetation efforts following wildfire focus on rehabilitating watershed lands to conserve water and soil and to prevent destructive floods. Historically, flood related erosional events have been a major issue. Recent studies suggest that seeding with rye grass may not be particularly effective in slowing erosion, at least in some sites and in some places in California. Seeding with native grasses from outside the local area of the burn has raised questions about contamination of local gene pools. Native grasses may also be more persistent than rye grass and prevent the recovery of the on-site vegetation species; these factors could be especially important in critical wildlife habitat areas. Emergency revegetation work may be necessary, but should be evaluated site-by-site. Cost of native grass seed is a significant factor to be examined. Mechanical and structural methods shall also be considered as they may be an effective and cost efficient way of dealing with erosion control and be less damaging to the ecosystem.
- B. Under Sections 4675 and 4676 of the Public Resources Code the CDF is authorized to perform specified acts to protect the public interest, including activities related to watershed rehabilitation. Under the California Environmental Quality Act and various Fish and Game Code sections, DFG is charged with protection of fish and wildlife and related habitat, including viability of habitat following wildfire.

II. JOINT POLICY FROM THE BOARD AND COMMISSION TO THEIR RESPECTIVE DEPARTMENTS

- A. Emergency watershed protection are those actions taken to assist in the recovery of the on-site vegetation and to protect downstream values of urban and wildland watersheds from excessive erosion and flooding following wildfire. These actions shall recognize the distinct differences between environmental impacts which are suppression-related and human-caused, and those which are wildfire-related and naturally occurring.
- B. Program objectives shall be achieved by utilizing the Incident Command System (ICS) to obtain an evaluation of impacts to a watershed for fires occurring in areas of State Responsibility (SRA). This should be done in such a way to:

1. Keep damage to a minimum during mop-up;
 2. Have emergency watershed work initiated during the active suppression stage of the fire and have work completed shortly thereafter but before the first heavy rainfall.
- C. Emergency revegetation shall be limited to critical areas as defined by the Departments and should consider long term ecosystem health and processes.
 - D. Mechanical methods of erosion control shall be considered during the evaluation of emergency watershed work. When revegetation actions are determined to be the most appropriate for the site, efforts shall consider enhancing natural plant recovery and succession. In determining the most appropriate watershed treatment, the long-term protection of the environment shall be evaluated along with the costs and benefits.
 - E. CDF has established a working group and policy task force, including DFG staff, to review the current watershed rehabilitation program and all available related information. The study, among other things, shall specify appropriate limits to where reseeding can occur and how it should be carried out. The study should be completed prior to the end of the next fire season and reports made to the Board and the Commission.
 - F. The Departments shall evaluate the effectiveness of their efforts in attaining the intent of this policy and report to the Board and Commission at their May meeting.

III. POLICY FROM THE COMMISSION TO THE DEPARTMENT OF FISH AND GAME

- A. The Department shall participate in the development of rehabilitation/watershed work response plans.
- B. The Department shall report to the Commission annually on the implementation of this policy, including any areas of disagreement with CDF.

IV. POLICY FROM THE BOARD TO THE DEPARTMENT OF FORESTRY AND FIRE PROTECTION

- A. Until the Department completes its study, CDFs current policies shall apply.
- B. The Department shall report annually to the Board on the implementation of this policy, including any areas of disagreement with DFG.
- C. CDF staff shall advise DFG of rehabilitation efforts and request appropriate staff to participate.

(Adopted 5/9/94)

COOPERATIVE FIRE PROTECTION AGREEMENT

And OPERATING PLAN

By and Among

The California Department of Fish and Game

And

The California Department of Forestry and Fire Protection

For

Department of Fish and Game-Administered Lands in San Diego County

The parties to this Agreement, dated JUNE 1ST, 2012, are the Department of Fish and Game ("DFG") and The California Department of Forestry and Fire Protection ("CAL FIRE").

I. PURPOSE and AUTHORITY

The purpose of this Agreement is to describe a cooperative fire protection plan between the two agencies for DFG lands (including Wildlife Areas, Ecological Reserves and Undesignated Lands). This Operating Plan is prepared in conformance with the joint Board of Forestry/Fish and Game Commission Policy of 1995 whereby the two agencies agreed to work cooperatively in Pre-fire Planning, During-fire Response and Post-fire rehabilitation for the benefit of wildlife and natural resources. Both agencies believe that DFG involvement is most critical during the pre-fire planning stages, and is also the most effective for fire ecology and fuel management considerations. The agencies wish to memorialize their commitment to work collaboratively towards the implementation of the Operating Plan as described in this Agreement.

II. BACKGROUND

The Department of Fish and Game acquires land for a variety of purposes through a number of methods. The purposes include, but are not limited to, protection of threatened, endangered or rare wildlife, sensitive habitats, critical wildlife corridors or areas of seasonal importance; other areas are acquired for their public recreational and/or educational opportunities (such as hunting, fishing, nature study, or research). The methods by which these are acquired include fee title purchase, purchase of conservation easements, acceptance of donations or acceptance of properties for mitigation purposes. Areas are designated by the Fish and Game Commission as either an Ecological Reserve or a Wildlife Area, or are accepted as an easement or mitigation property. Within CAL FIRE direct protection responsibility in San Diego County, DFG holds fee title to approximately 44,666 acres of land on 14 distinct properties (Appendix A).

The Department of Forestry and Fire Protection protects the people of California from wildfires, responds to emergencies, and protects and enhances forest, range, and watershed values

providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE is responsible for the wildland fire protection on State owned lands that fall within designated State Responsibility Areas including DFG owned lands.

DFG and CAL FIRE are actively involved in efforts to reduce fuel hazards, improve effects from fire management, and implement safe and reasonable habitat alterations that benefit both wildlife and reduces severe fire risk. The intent of these efforts is to achieve the mutual goals of both agencies with respect to minimization of habitat degradation while providing for public safety, property and habitat protection. Habitat improvement through prescribed fire or wildfire can be beneficial to wildlife and both agencies will strive for understanding and communicating each others' expertise and, through increased cooperation and coordination, implement state and national fire strategies.

III. OBJECTIVES

The parties' long-term objectives for the Operating Plan include, but are not necessarily limited to, the following:

1. Ecosystem sustainability to recognize the role of fire in sustaining healthy ecosystems, restoration, rehabilitation of burned lands, and the importance of sound science in fire management activities including compiling baseline data on the use, effectiveness, and efficient application of prescribed fire as a method of habitat preservation and improvement. In addition, baseline data will be collected on the physical and biological resources, fire history, access and infrastructure of each DFG property within San Diego County and compiled into a fire management plan associated with each property.
2. Use vegetation maps, fire history maps, and other tools to develop risk assessments which will identify fire potential on the various DFG properties, threats to the surrounding communities, and assisting in prioritizing appropriate treatments to reduce fire hazard.
3. Use information gained through inventory, monitoring and review of research by others to evaluate and improve the program; translate scientific knowledge into policy and management practices, including but not limited to:
 - a. Researching the role of fire in the southern California Mediterranean ecosystem,
 - b. Identifying how fire can be used to target exotic plant species for eradication,
 - c. Researching the effects of fire exclusion,
 - d. Researching how exotic plants affect native seed banks,
 - e. Determine how current fire frequency affects the ecosystem with respect to the historic fire regime,
 - f. Identify how post-fire recovery patterns may be used in restoration projects.
4. Providing locations for fire-fighting training and vegetation management programs through prescribed burns or other treatments.
5. Coordinating on fuel management and buffer zones in areas where DFG property abuts privately owned lands and residential communities.

6. Encouraging all people living in the urban-wildland interface to participate in fire safe programs, providing defensible space around their residence and protecting the habitats within their communities and to develop prevention plans to reduce number of human-caused ignitions.
7. Reducing habitat degradation from unplanned suppression activities in the event of a wildfire by focusing on pre-fire planning activities.

IV. ROLES

The agencies envision their respective roles in furthering the objectives of the Operating Plan will include the following:

1. DFG will provide biological and site information for use during pre-fire planning, fire response and post-fire rehabilitation to incorporate into area specific fire management plans.
2. DFG will strive to maintain sufficient roads and associated infrastructure in accessible condition for fire-fighting vehicles, and, where possible will provide water sources for fire suppression, prescribed fire operations and pre-suppression activities.
3. CAL FIRE will provide expertise on information of fire history, fire-fighting strategy, fuel reduction priorities, vegetation management programs and habitat enhancement potential through involvement in the area specific fire management plans.
4. CAL FIRE will provide the direct protection responsibility for the DFG properties included in this agreement and will provide the resources for suppression activities pursuant to any existing land/fire management plans to the extent feasible during a wildfire event on DFG property. Suppression priority will always be given to life and property.
5. During a wildfire event on DFG property, the DFG Agency Representative will be available to provide CAL FIRE with technical advice about ecological issues concerning wildlife, fisheries, sensitive plants and their habitat within the suppression area, as well as known cultural resources and DFG facilities/infrastructure within the suppression area and to explore alternative fire suppression methods to minimize adverse impacts. The DFG Agency Representative will provide this information to the Incident Commander through the Incident Command System (ICS).

The DFG Agency Representative's involvement will not interfere with fire suppression efforts to protect lives and real property. The DFG Representative is to lend assistance and advise CAL FIRE on how to protect the natural environment as much as possible from the impacts of fire and fire suppression activities, while allowing the fire fighting effort to proceed unimpeded.

V. SPECIAL MANAGEMENT CONSIDERATIONS

The agencies agree the following areas will receive priority consideration during a wildfire event on DFG property. Where the DFG desires restriction on normal suppression methods, a suppression plan will be agreed to at the Incident Planning meetings, approved by the line officers, and included as part of the suppression plan. The Incident Commander will retain the final authority for the strategic and tactical decisions on an incident.

1. Sensitive, Threatened and Endangered Species

DFG, as the Agency Representative, will notify and advise the Incident Commander of any known threatened and endangered (T&E) species locations within or adjacent to DFG property. The Incident Commander will, under the advice of the Agency Representative, make every reasonable effort to minimize the impact on T & E species and their habitats. Various T&E species are found on DFG properties throughout San Diego County in a variety of habitat types. As a reference, a list of the T&E species known to exist on these areas and a series of vegetation maps are attached. (Appendix B).

2. Cultural and Archaeological Sites

DFG, as the Agency Representative, will notify and advise the Incident Commander of any known cultural and/or archaeological locations within or adjacent to DFG property. The area specific Fire Management Plan will include known sites and will be provided to the Incident Commander and Planning Section at the first opportunity.

3. Wilderness Areas

Otay Mountain Ecological Reserve, though not declared a Federal Wilderness Area, is to be managed with the same considerations and restrictions as the adjacent Bureau of Land Management's Otay Wilderness Area. Access to this area by vehicle will continue to be allowed on the pre-existing roads only.

4. Communities and Structures

The various Fire Districts have the primary responsibility for the protection of structures. Five DFG properties include occupiable structures at this time, including, from north to south, Cañada de San Vicente (Undesignated Land), Crestridge Ecological Reserve, Rancho Jamul Ecological Reserve, Hollenbeck Canyon Wildlife Area, and San Felipe Valley Wildlife Area. These areas also contain windmills, pumps, wells, electrical lines, water containments, gates and access control fences that are considered a state asset to protect. Each area specific Fire Management Plan will include the location and type of each structure and resident notification information (address, telephone number), if applicable.

5. Repair of Suppression Activity Damage

Repair of suppression activity damage per CAL FIRE standards (California Code of Regulations or Public Resources Code) (e.g. spreading of dozer berms, installation of water bars, minor road repairs, excavation of dozer lines, gate and fence repair, etc) will normally be done by the agency with direct protection responsibility for the fire as an integral part of overhaul/mop-up. DFG agency representative will be responsible for contacting CAL FIRE for consultation on repair activities. Any rehabilitation beyond this

level is the responsibility of the DFG on their property.

6. Other Areas Identified in Land Management Planning Documents or Otherwise Requiring Special Protection

Some ecosystems are very fragile to intense fires and associated suppression efforts that may increase erosion events or irreparably damage the habitat integrity. The greatest ability to be sensitive to these types of habitat impacts is through pre-fire/pre-suppression planning activities. CAL FIRE will review and provide input to DFG Land Management Plans with regards to the role of fire and suppression specific to each property.

VI. DELINEATION AND DESCRIPTION OF FIRE PROTECTION ELEMENTS

1. Identification of CAL FIRE protected DFG properties.

At this time CAL FIRE holds direct protection responsibility for 14 DFG owned properties distributed throughout San Diego County for a total of approximately 44,666 acres. See attached Appendix A.

2. Identification of DFG protected properties.

A complete list of DFG properties (covered in this agreement) in San Diego County including property name, location, staff manager name and contact info, DFG supervisors contact info, CAL FIRE Battalion, and Battalion Chief name can be found in Appendix A.

3. Pre-planned Initial Attack Response Areas by Dispatch Levels and resources

This data is determined by CAL FIRE and is pre-loaded in the CAL FIRE's dispatch Computer Aided Dispatch (CAD) system.

VII. OPERATIONAL PROCEDURE

1. Fire Notification

The CAL FIRE shall notify the DFG Regional Coordinator of all known fires on or threatening DFG properties. This notification shall be via the Emergency Communications Center (ECC) to the 24-hour phone number supplied by the DFG (Dispatcher – Surcom (951) 443-2944) as soon as operationally feasible after the ownership determination has been made by CAL FIRE.

This notification will include the location of the incident, CAL FIRE contact's name, phone number and Incident Command reporting location. Upon receiving notification of an incident the DFG dispatcher will contact the DFG Regional Coordinator. The DFG Coordinator will contact the Monte Vista ECC with the name, phone number and ETA of the Agency Representative assigned to the incident.

2. Initial Attack and Draw down of Initial Attack Forces

The CAL FIRE agrees to aggressively pursue initial attack plans that utilize closest suppression resources through pre-existing mutual assistance agreements.

3. Aircraft Usage

The CAL FIRE acknowledges the desire of the DFG to exclude or limit the application of fixed wing or helicopter delivered retardant and foam to DFG lands. The Incident Commander shall consider this desire when determining appropriate suppression tactics.

Special consideration will be given to the exclusion of retardant or foam application within 200' of riparian habitat or wetland areas.

In all cases, the protection of life and real property will take precedence when determining the use of retardant or foam.

Helicopter use will be allowed for purposes of transportation of personnel and supplies, rescue, reconnaissance, and aerial application of water. Areas may be identified by the DFG Agency Representative as sensitive to helicopter landing. The Incident Commander will take this into consideration and when feasible avoid landings in these areas.

4. Modified Suppression Tactics

Both parties to this agreement recognize that from an environmental standpoint, damage caused by fire suppression efforts at times is greater than the damage caused by the wildfire. In order to reduce this potential damage the Incident Commander, in consultation with the Agency Representative shall consider when appropriate, the use of modified suppression tactics. CAL FIRE shall employ Minimum Impact Suppression Tactics (MIST), including adjusting tactics to avoid sensitive natural resources and cultural resources where tactically feasible. This may include such actions as allowing the fire to burn to existing roads, fuel breaks or naturally occurring barriers, minimize the construction of fireline using mechanical equipment, use helicopter long lines instead of constructing helispots, and use cold trail techniques and natural barriers instead of line construction. Use of MIT will not compromise firefighter or public safety or overtly impact overall strategic plans and tactical operations. Both parties understand and accept that use of these tactics may result in more acres being burned.

5. Handcrews and dozers

In an effort to minimize suppression impacts on DFG properties, the Incident Commander will consider the use of existing roads and natural fuel breaks whenever tactically feasible, even when this tactic will result in more acreage being burned.

Cutting of mature trees will only occur when they pose a direct threat to fire line integrity or fire fighter/public safety.

Dozer and hand lines will be avoided in vernal pools and all other wetlands or riparian areas whenever operationally feasible. When unavoidable, lines within riparian areas and drainages deemed necessary will be constructed as close as is feasibly possible to a 90-degree angle to riparian zone to minimize impacts.

6. Use of Staging Areas

Operation of heavy vehicles off designated roads often times causes damage to sensitive species and adversely compacts soils. Many times these sensitive areas appear to be good locations for staging areas. Unless operationally imperative, only pre-designated

staging areas or areas designated by the Agency Representative will be utilized.

7. Pre-Incident Planning

Many issues that arise during emergency management can be avoided through joint pre-incident planning by managers at the local and regional level. Local DFG Managers and CAL FIRE Battalion Chiefs are encouraged to conduct joint planning meetings at the various locations to become better informed and prepared for emergencies. Planning at the Regional (DFG)/Unit (CAL FIRE) level is required on an annual basis by this Operating Plan.

8. Post Incident Action Analysis

To benefit from lessons learned on fire incidents falling under the terms of this Operating Plan, the parties should conduct a post-incident action analysis and debriefing. In all cases, these reviews will be conducted jointly by the CAL FIRE and DFG.

9. Fire Cause Investigations

Fire investigations on DFG owned properties will be the responsibility of, and conducted by CAL FIRE. Informational and/or investigative reports will be provided to DFG when available.

10. Incident Support Facilities

The facilities located at the Rancho Jamul Ecological Reserve Conservation and Education Center is well suited to supporting an Incident Base, Helibase and/or Incident Command Post. These facilities will be made available to Fire Managers for use and will be listed in the Emergency Resource Guide located in the Monte Vista ECC. CAL FIRE notification/request to utilize the RJER will be made as early as possible in order to prepare the facility for such use.

VIII. FIRE PREVENTION/PRE-FIRE ENGINEERING

Mutual interest projects for fire prevention and pre-fire engineering have been implemented between CAL FIRE and DFG with mutually beneficial results. These joint projects are beneficial to both agencies and the public and should be continued and encouraged. Examples of mutual-interest projects include but are not limited to vegetation management, fuel reduction, habitat improvement and training activities, and maintenance of fire defense improvements. To sustain and enhance this cooperative effort, both parties agree that this document will serve as "Right of Entry" onto the properties covered by this agreement for the purposes of conducting Pre-Fire Management project planning and implementation. CAL FIRE will inform the appropriate DFG reserve manager (Attachment A) prior to conducting any project planning and/or implementation on any DFG property. Additionally, both agencies will mutually agree that, prior to project implementation, the role of "Lead Agency" will be determined for insuring compliance with all CEQA requirements or other environmental laws and regulations.

XI. ADMINISTRATION

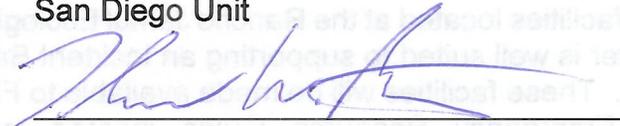
This Agreement is not intended to confer benefits upon, or be subject to enforcement by, third parties. Any supplement or modification to this Agreement must be in writing and signed by all of the parties. A review of this Agreement by both parties will take place annually prior to the Declaration of Fire Season. This Agreement is valid and enforceable only if the Budget Act makes sufficient funds available for the fiscal year(s) involved for the purposes of this program. In addition, this Agreement is subject to any additional restrictions, limitations, or conditions enacted by the Legislature and contained in the Budget Bill or any statute enacted by the Legislature which may affect the provisions, terms, or funding of this Agreement in any manner.

IN WITNESS WHEREOF, the parties commit to working collaboratively towards the implementation of this Cooperative Agreement and Operating Plan as described above.

State of California
Department of Fish and Game
South Coast Region

State of California
Department of Forestry and Fire Protection
San Diego Unit


Ed Pert
Regional Manager


Thomas Porter
Unit Chief

5-30, 2012

6/6/2012, 2012