CALIFORNIA FISH AND GAME COMMISSION

BOARD OF FORESTRY AND FIRE PROTECTION

JOINT POLICY STATEMENT ON PACIFIC SALMON AND ANADROMOUS TROUT

I. FINDINGS

The Fish and Game Commission (Commission) and the Board of Forestry and Fire Protection (Board) find:

1. That the four species of Pacific salmon and anadromous trout found in California streams: Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), anadromous rainbow trout (*Oncorhynchus mykiss*) (commonly known as steelhead), and anadromous coastal cutthroat trout (*Oncorhynchus clarkii*) (herein jointly referred to as salmonids) are vitally important ecological and economic resources in California.

2. That there is considerable scientific, commercial, and public concern over the decline of salmonids in California. Several actions have been taken by the State and the Federal government to provide legal protective status for salmonids. Under the California Endangered Species Act (CESA), the Commission has listed runs of Chinook salmon and coho salmon, while under the Federal Endangered Species Act (ESA) the National Marine Fisheries Service (NMFS) has listed runs of Chinook salmon, coho salmon and stocks of anadromous rainbow trout (Appendix 1).

3. That forestry practices interact with watershed and riparian processes and can positively or negatively affect upstream and downstream freshwater habitat for salmonids. Properly implemented forestry practices can reduce the risk of catastrophic fires that impact water quality and other habitat elements important to salmonids. Sound forestry practices can help maintain and restore the riparian functions that are linked to salmonid habitats. This Joint Policy encourages positive forest management practices, particularly those associated with roads, unstable areas, and riparian areas ~~along streams~~, that protect salmonid habitat by: 1) reducing stream temperatures; 2) reducing sediment levels in streams; 3) enhancing composition and abundance of fish species and aquatic macroinvertebrates; 4) stabilizing stream banks and streamside

areas; 5) increasing instream structural complexity; 6) increasing large woody debris recruitment; and 7) increasing base flows in streams.

4. That strong pressures for parcelization, fragmentation, and land use conversion exist. The loss of forestland to other uses can degrade habitat. The retention and active management of forested lands in a manner compatible with the freshwater life histories of salmonids is vital to maintaining salmonid habitat that is in good condition and to restoring degraded habitat. Retention of viable, working forest landscapes is therefore essential to salmonids.

5. That this Joint Policy is intended to focus on the recovery, conservation, preservation, and restoration of salmonid populations and their habitats by the Department of Fish and Game and the Department of Forestry and Fire Protection (departments) utilizing their respective authorities in the implementation of watershed-based forest management actions.

6. The Joint Policy emphasizes that these species are in great peril and that forest management practices based on sound science and coupled with other federal and state programs have the potential to assist in their recovery.

7. That adequate staffing and funding are necessary to implement the actions of this Joint Policy. The Commission and the Board, along with their respective departments, will seek appropriate funding for the implementation of the actions identified in this Joint Policy. Given the uncertainty for consistent staffing and funding, efficient regulatory systems must be developed that address environmental protection and overlapping review. Funding priority will be given to programmatic, watershed-scale restoration activities to provide the greatest benefit to salmonids on forested lands.

Therefore, the Commission and the Board establish these goals;

1. to recover salmonid populations to meet delisting standards,
2. maintain and restore watersheds,
3. retain managed working forests on timberlands,
4. encourage watershed-scale programmatic approaches to achieve these goals,
5. and so contribute to building healthy communities.

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

The Commission and Board adopt the following Joint Policy for the Department of Fish and Game (DFG) and the Department of Forestry and Fire Protection (CAL FIRE) (herein jointly referred to as departments):

A. The departments will administer all programs consistent with this policy statement;

B. The departments will report annually to the Commission and the Board: 1) progress on implementation of this policy; 2) progress on implementation of strategies to recover listed salmonids 3) the status of salmonid populations and habitat, and 4) actions to be taken in the coming year;

C. In the event of disagreement over implementation of this policy, the departments will inform the Commission and Board of the disagreement;

D. The departments will be guided by the understanding that it is the desire of the State of California to: 1) recover salmonid populations to viable self-sustaining levels; 2) maintain wild populations where they exist; 3) re-establish populations where feasible; 4) sustain the social, economic, and cultural uses that depend on working forest landscapes and salmonids; and 5) support actions that will lead to delisting of listed salmonids;

E. In accordance with laws and regulations protecting listed species, the departments will use their respective authorities to ensure that any project that the departments are notified of and that may result in take of listed salmonids either avoids take or is authorized for such take;

F. The departments will actively cooperate with each other and with other State and Federal agencies, private landowners, academic institutions and the public to facilitate and encourage feasible forest management activities which 1) implement the Recovery Strategy for California Coho Salmon, approved by the Commission in February 2004 (see Appendix 2 for timber management related recommendations); 2) implement the Steelhead Restoration and Management Plan for California, approved by DFG in 1996; 3) integrate federal recovery

strategies and plans for listed or candidate anadromous species into forest management activities. Programmatic approaches to achieve these goals are encouraged;

G. Using best available science, the departments will continue to work with the Board to assess the effectiveness of existing Forest Practice Rules and, as necessary, assist the Board in developing new forest practice regulations that avoid or mitigate adverse individual and cumulative impacts on salmonid habitat;

H. In cooperation with other agencies and in conjunction with the Board's ongoing work with its Research and Science Committee (RSC), both the departments will review the potential effects of global climate changes on forestry-fisheries interactions and the suite of potential options and actions necessary to protect forest lands and salmonid populations;

I. The departments will assist the Board in developing or revising existing monitoring programs for evaluating the effectiveness of adopted forest practice regulations and the effectiveness of mitigation measures for protecting and, when applicable, restoring anadromous salmonid habitat. Two such programs already receive support by the departments: the Interagency Mitigation Monitoring Program (IMMP) and the Forest Practice Rules Implementation and Effectiveness Monitoring Program (FORPRIEM) (see Appendix 3);

J. The departments will assist the Commission and the Board in developing and implementing salmonid monitoring programs and regional watershed assessments in order to assess the status of recovery and restoration efforts. These programs will be based on scientifically sound methodologies for determining fish population attributes; habitat status and trends, and progress toward restoration and recovery. Appendix ~~3~~ 4 contains a description of the components for monitoring and adaptive management programs that may be appropriate to consider for any forested watershed with salmonids;

K. The departments will participate in and assist the Board’s Monitoring Study Group (MSG). This group promotes information sharing, cooperation, and trust among state agencies, the public, and the timber industry, so that 1) state agencies collect sound, scientifically-based monitoring data in an efficient and

effective manner; 2) data analyses are properly undertaken; and 3) data is presented in a user-friendly fashion on a web-based server;

L. In order to achieve the Coho Recovery Plan goals outlined in Alternative C, numbers 6, 7, 10, 16, and 17 and conserve listed salmonids and the habitats that support them, the departments will use their respective authorities to 1) continue evaluating the Forest Practice Rules and DFG regulations, using scientific research and monitoring data, in order to make recommendations for changes to regulations; 2) ensure that any project that the departments are notified of and that may result in take of listed species either avoids take or is authorized for such take in accordance with laws and regulations protecting listed species; 3) take all feasible steps for the recovery, conservation, preservation, and restoration of listed salmonid populations and their habitats; and 4) give due consideration to those actions that are identified in recovery plans;

M. The departments will consult with National Marine Fisheries Service (NMFS) to further evaluate, and where feasible, to develop, Habitat Conservation Plan(s) for all applicable forestry practices state-wide in a timely fashion, and where forest landowners are interested, joint HCP/Natural Community Conservation plans.

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

In addition, the Commission specifically charges DFG as follows:

A. Implement fisheries restoration grant programs and other restoration programs consistent with the availability of funding to implement high priority recovery activities in an efficient and effective manner. The Commission acknowledges that such grant and restoration programs cannot guarantee instream flows or "safeguard" habitat from additional damages to watershed processes stemming from past land use practices. Grant and restoration funding can help to restore past physical habitat damages and initiate plans for watershed-scale restoration activities on forested lands;

B. Review timber harvesting plans, and where appropriate, recommend to CAL FIRE: 1) measures which will either avoid, minimize or fully mitigate impacts to listed salmonids and salmonid habitat; and 2) measures that will facilitate recovery of listed salmonid populations and the habitats that support them;

C. Provide an active liaison to the Board and CAL FIRE on issues related to timber harvest, forestry practices, and fire protection for landscapes occupied by salmonids;

D. Ensure implementation of salmonid population and habitat monitoring programs to assist in the conservation, preservation, and enhancement of these species; and

E. Assist the Board and CAL FIRE in developing monitoring programs necessary for evaluating the effectiveness of mitigation measures and forest practice rules in preventing, or minimizing adverse impacts to salmonids, and the effectiveness of measures intended to facilitate recovering and restoring salmonids in forested watersheds.

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

In addition, the Board specifically charges CAL FIRE as follows:

A. Address potential impacts to salmonids and anadromous trout, consistent with state and federal recovery strategies, in CAL FIRE's project review processes and consult with DFG when projects are submitted in planning watersheds containing salmonid habitats;

B. Support a Technical Advisory Committee (TAC) in order for the Board to adopt permanent rules for protection of listed salmonids based upon a study of factors that significantly effect the present and future condition of timberlands (ref. PRC § 4552) and through consultation with various groups including agencies and educational institutions (ref. PRC § 4553). In collaboration with fisheries experts, the TAC will collect and evaluate scientific information and knowledge about salmonids and forest management activities in relation to protection, recovery, preservation, and conservation of listed species;

C. Provide staff support to the Board's Research and Science Committee (RSC), to consistently provide independent credible scientific information for Forest Practice Rule development or modification. The RSC will provide technical recommendations to the Board for monitoring projects and provide sound technical advice to the Board regarding watershed-related resource issues.

D. Provide support to the Monitoring and Tracking Sub-Committee of the MSG. This sub-committee will collaborate with DFG and others to assist in:

   1) Reviewing the effectiveness and appropriateness of monitoring being conducted on non-federal timberlands, and make recommendations for improvements.

   2) Evaluating effectiveness of monitoring conducted to assess potential impacts of timber harvest operations on the beneficial uses of water related to salmonids.

3) Evaluating costs and benefits of monitoring metrics and techniques to aid the Board, timberland owners, regulatory agencies, and the public in selecting technically adequate, efficient, and effective monitoring that will ensure protection and facilitate recovery of listed salmonids.

E. Provide support for development of risk-based approaches to cumulative watershed effects analyses. Additionally, work to improve programmatic long-term management models. Scientifically based models need to be expanded and improved to provide sound science-based reliable information that include considerations for the protection, recovery, preservation, conservation, and restoration of salmonid populations and the habitats that support them; and

F. CAL FIRE's Fire and Resource Assessment Program will assist the Board in developing a web-based long term repository for science based monitoring information and scientific research to maintain quality control and allow for the dissemination of information to agencies and the interested public contingent upon availability of staff, funding and logistical support.

Appendix 1. State and Federal listings of salmonids in California

Species Statutory Act- Geographic Range	Status	Effective Date
Coho Salmon		
CESA- South of San Francisco	endangered	12/31/1995
CESA- San Francisco to Punta Gorda	endangered	3/30/2005
CESA- Punta Gorda to Oregon border	threatened	3/30/2005
ESA- Central California Coastal	endangered (threatened)	8/29/2005 (12/2/1996)
ESA- Southern Oregon~~-~~Northern California Coasts	threatened	6/5/1997
Chinook Salmon		
CESA - Sacramento River Winter-Run	endangered	9/22/1989
CESA - Sacramento River Drainage Spring-Run	threatened	2/5/1999
ESA – Sacramento River Winter-Run	endangered (threatened)	2/3/1994 (11/1990)
ESA - Central Valley Spring-Run	threatened	11/15/1999
ESA - California Coastal	threatened	11/15/1999
Anadromous Rainbow Trout (Steelhead)		
ESA - Southern California	endangered	10/17/1997
ESA - South-Central California Coast	threatened	10/17/1997
ESA - Central California Coast	threatened	10/17/1997
ESA - Central Valley, California	threatened	5/18/1998
ESA - Northern California	threatened	8/7/2000

Appendix 2 Timber Management Recommendations (Excerpted from Recovery Strategy for California Coho Salmon, pages 7.15 – 7.18. DFG, February 2004)

Department as used in Appendix 2 means Department of Fish and Game

ALT-C-01 California Range-wide Coho Salmon Recovery Team (CRT) recommends government commitment of adequate financial, material, and personnel support for the life of the Recovery Strategy for on-the-ground recovery actions, identified in the Recovery Strategy. Possible funding mechanisms may include:

a. Legislation specifically identifying funding for recovery;
b. Cost-share programs with private landowners, stakeholder groups and local governments; and
c. Endowment and/or grant programs cooperatively with private sources.

ALT-C-02 The Department should provide technical expertise to support appropriate cooperatively undertaken recovery actions, which may include:

a. Technical advisors to assist in the development of restoration proposals;
b. Technical expertise to assist in the implementation of recovery activities on-the-ground; and
c. Technical expertise to assist in training and education on coho restoration projects.

ALT-C-03 The Department should develop and implement a program to design and implement a coho salmon recovery plan for individual CALWATER Planning Watersheds. The program should promote and enable cooperative working relationships between agencies, landowners and residents. This program should include:

a. Federal and State funding to assist landowners in performing watershed analysis in a manner usable by the Department;
b. A systematic evaluation at the watershed level to identify key limiting factors for the recovery of coho salmon;
c. Identification of site-specific sources and locations of the key limiting factors;
d. Identification of restoration projects for watershed transportation systems, fish passage, slope stabilization measures, erosion control measures and drainage structures;
e. Identification of beneficial management practices to protect existing values; and
f. Use of these plans and the data that support them as the principle reference document, which would save landowners and/or project proponents additional costs associated with repetitive analysis and paperwork for each project.

ALT-C-04 The Department should develop an information repository system for individual Planning Watersheds that utilizes and builds upon existing information, adding new information as it becomes available, while ensuring adequate confidentiality for information specifically pertaining to an individual’s private property.

ALT-C-05 The Department should promote and support programmatic approaches to address key limiting factors in each CALWATER Planning Watershed with a watershed plan. Include these components:

a. Where appropriate and where costs to landowners are offset by monetary assistance, technical assistance or regulatory incentives, encourage landowners to develop and implement Road Management Plans that contribute to the restoration of coho salmon habitat;
b. Where appropriate and where the costs to landowners are offset by incentives, encourage the use of a licensed engineer to assist in the design and construction of watercourse crossings;
c. Continuing education and training (classroom and field) to ensure watercourse crossings are appropriately designed, constructed and maintained;
d. Cooperative habitat restoration projects that extend across ownerships to address habitat restoration efforts in a coordinated and cost effective manner; and
e. State funding to assist landowners to implement coordinated watershed riparian vegetation improvement programs that:

i. Identify areas within the riparian zone where planting of riparian vegetation, including conifers, to improve coho salmon habitat is appropriate and
ii. Promote vegetation modification (e.g., thinning, removal of undesired competitive vegetation) to accelerate riparian vegetation recovery and enhancement for coho salmon habitat.

ALT-C-06 The Department should set up a long term monitoring system that measures the implementation and effectiveness of Forest Practice Rules in effect at the time of the monitoring. The monitoring shall measure the effectiveness of the rules for maintenance and recovery of coho salmon habitat.

ALT-C-07 Encourage California Department of Forestry and Fire Protection (CDF) and California Geological Survey in concert with the Board of Forestry (through the Monitoring Study Group) to develop a monitoring program to evaluate whether mitigation measures implemented by Registered Professional Foresters as part of Timber Harvest Plans (THPs) are effectively reducing the risk of mass soil movement associated with harvesting operations, including road and landing construction. Any monitoring system should be designed to compare harvested areas to non-harvested areas so it can be determined whether harvesting, road and landing construction activities increase the likelihood of mass soil movement. The THP work completion report and the Monitoring Study Group's Hillslope Monitoring Program, as well as periodic air photo flights and photo interpretation, could provide the basis for monitoring and evaluation.

ALT-C-08 CDF document voluntary efforts taken by forest landowners beneficial to coho salmon that:

a. Provide mitigation measures that exceed FPRs requirements; and/or
b. Are identified in specific CALWATER Watershed Recovery Plans.

ALT-C-09 The Department should develop a system to evaluate implementation and effectiveness of voluntary efforts to recover coho salmon populations.

ALT-C-10 The Department should develop, with appropriate peer review, a long-term consolidation and analysis of resource assessments and monitoring data.

ALT-C-11 The Department should collaborate with CDF and appropriate industry groups to provide watercourse training and roads assessment watershed academy.

ALT-C-12 Acquire conservation easements or land in fee title from willing landowners to protect coho salmon habitat.

ALT-C-13 The Department should seek funding for staff to improve effectiveness of the Department timberland conservation program.

ALT-C-14 Continue participation in full review of THPs and participation and other timberland conservation activities associated with managing timberlands.

ALT-C-15 In watersheds with coho salmon, the Department will prepare a “coho salmon biological assessment” when acting as a Lead or Responsible agency under the California Environmental Quality Act (CEQA) for timberland conservation activities, including but not limited to the review of timber harvesting plans. A “coho salmon biological assessment” is an assessment by the Department of project effects, if any, on coho salmon. The biological assessment will include conclusions by the Department regarding potential for the project to “jeopardize” the long-term survival of or “take” coho salmon. It will also include the Department’s assessment of the significance of project impacts for purposes of “mandatory findings of significance” under 14 CCR §15065 (a), (b), and (c).

ALT-C-16 In conjunction with CDF, qualified landowners representatives and experts, and qualified independent scientists with appropriate expertise, and consistent with the availability of staff, the Department will monitor for five years (or more if necessary to develop an adequate sampling regime) the implementation of the FPR in effect at the time to determine whether these rules are consistent with the long-term survival of coho salmon.

ALT-C-17 If results of monitoring, based on substantial evidence as the term is defined by 14 CCR §15384, conclude that the implementation of the FPR s are not providing adequate protection for the long-term survival of coho salmon, the Department in cooperation with CDF and interested stakeholders will develop recommendations to ensure adequate protection for the long-term survival of coho salmon.

[There is no number 18]

ALT-B-19 Recommend that a “proof of concept” pilot program be developed and implemented to test a mathematical or scientific method of cumulative effects analysis as was suggested in the 2001 report, “A Scientific Basis for the Prediction of Cumulative Watershed Effects” (otherwise known as the “Dunne Report”), by the U.C. Committee on Cumulative Watershed Effects. The pilot program would be developed and implemented by a panel of experts such as those at U.C. in cooperation with the Department, CDF, and SWRCB.

ALT-B-20 Recommend that CDF and the Board of Forestry work with the Department and other interested agencies and stakeholders to establish a procedure for THPs to document and evaluate the implementation and effectiveness of coho-related mitigation measures prior to the official completion inspection by CDF and other agencies.

Appendix 3 Existing Monitoring Programs

Forest Practice Rules Implementation and Effectiveness Monitoring (FORPRIEM) Program. FORPRIEM provides sound science based data on the adequacy of the implementation and effectiveness of Forest Practice Rules specifically designed to protect water quality and riparian habitat. It uses information collected during THP Work Completion Inspections and Erosion Control Maintenance Inspections. FORPRIEM collects information on randomly located road segments, WLPZ segments, and watercourse crossings and uses a random 10 percent sample of THPs throughout the state. It is a continuation of monitoring that was previously completed under the MCR monitoring program, with data collection beginning in the fall of 2007. Data is primarily obtained by CAL FIRE Forest Practice Inspectors, but other agency personnel are invited to participate in this monitoring program. Data collected in this Program will complement data obtained in the IMMP monitoring program.

Interagency Mitigation Monitoring Program (IMMP). This program will build on what has been learned in CAL FIRE/Board's earlier Hill Slope Monitoring Program, Modified Completion Report, and other monitoring efforts. The IMMP will emphasize data collection and evaluation of high risk plans and the effectiveness of practices implemented at high risk locations within a plan to protect water quality and aquatic habitats. Effectiveness here refers to determining if prescribed measures applied during the plan operations resulted in the intended conditions (MOU Monitoring Workgroup 2005). The Program results will be reported to the Board. The primary monitoring related objectives of the IMMP are:

- Determine how often practices designed to reduce impacts to water quality at high risk locations within a plan are properly implemented (including but not limited to mitigation measures developed by the Registered Professional Forester (RPF) and/or an interagency team).
- Determine how often these practices, when properly implemented, are effective in protecting water quality on non-federal timberlands in California.

- Provide a feedback loop to RPFs, CAL FIRE Forest Practice Inspectors, state and federal agency personnel, the public, and others regarding what forestry-related practices at high risk sites require improvement to protect water quality.

Appendix 4 Example of Comprehensive Monitoring and Adaptive Management Programs (Excerpted from 14 CCR § 916.11.1 (936.11.1))

The Board, with the assistance of the Department of Forestry and Fire Protection, will implement a comprehensive monitoring and adaptive management program for timber harvesting operations in watersheds with salmonid. Four types of monitoring will be addressed under this program including compliance, implementation, effectiveness, and validation monitoring.

The monitoring program will:

1. Determine whether the operational Forest Practice Rules and associated hill slope and instream mitigation measures afford a level of protection that is both appropriate and adequate to ensure protection and meet the recovery goals for listed salmonids and the habitat that supports them;
2. Provide monitoring and analyses necessary to ensure all Forest Practice Rules are being implemented fully and correctly consistent with the CESA;
3. Provide timely results for the Board to assess effectiveness in meeting the stated policy goals; and
4. Evaluate the effectiveness of minimization and mitigation measures and identify when site-specific rules should be revised to accomplish the program purpose.

The adaptive management program will have five elements addressing:

1. Identification of substantial necessary new information;
2. Collection of substantial new information;
3. Evaluation of substantial new information; and
4. Determination regarding the necessity or benefit of adjustments and improvements to mitigation and protective measures, including the Forest Practice Rules, based upon the substantial new information.
5. Regular reports to the Board and to joint meetings of the Board and Commission about program results.