

# Summary Report

## Wild Salmon Protection Workshops

**Convened by the California Ocean Protection Council**

**August 14, 2008**  
Sausalito, CA

**August 26, 2008**  
Eureka, CA

**Prepared by:**

Eric Poncelet and Peter Harkema  
*Kearns & West, Inc.*

J. Michael Harty  
*Harty Conflict Consulting & Mediation*

September 5, 2008

## **INTRODUCTION – WORKSHOP PURPOSE AND ORGANIZATION**

This report summarizes key outcomes from two Wild Salmon Protection Workshops convened by the California Ocean Protection Council in August 2008. The first workshop was held August 14 in Sausalito, CA, and the second was held August 26 in Eureka, CA.

### **Workshop Goals, Focus, and Intended Outcomes**

The workshops were identical in structure and had two main goals:

- To take stock of public views on primary causes of wild salmon population decline; and
- To gather recommendations from members of the public on objectives and strategies for improving California's wild salmon protection policy, including recommendations on steps that the OPC can take.

An additional goal was to introduce the OPC and its role in the ocean policy domain to those interested in salmon protection and the broader public.

Workshop participants were asked to address issues of salmon protection in light of the long-term (i.e., 150 year) decline of salmon populations and recommend long-term policy solutions to assure robust wild salmon populations at the end of this century. The focus was on "wild" salmon, which generally are viewed as being more resilient for long-term adaptability and survival of the species (for example, within the context of global climate change). For the purposes of the workshops, "wild" salmon was defined as those salmon produced by natural spawning in natural or minimally altered fish habitat from parents that were spawned and reared in similar habitats.<sup>1</sup> At the same time, the workshop conveners acknowledged the linkages between wild salmon and hatchery salmon and assumed that salmon hatcheries would continue to be used in the future.

OPC staff plan to present the outcomes of the workshops at the OPC's September 10-11, 2008 meeting in Half Moon Bay and to use the workshops to help develop specific wild salmon policy options for consideration and possible action by the OPC at a future OPC meeting.

### **Workshop Organization**

The workshops opened with an introduction of the OPC. Next, workshop participants were asked to participate in a straw ballot exercise to take stock of primary causes of wild salmon population decline in California. Participants next engaged in an extended discussion on key objectives and strategies for improving California's policy for wild salmon protection. The workshops concluded with a recap of next steps. The workshop agenda is attached as Appendix A.

The workshops were facilitated by Eric Poncelet of Kearns & West and J. Michael Harty of Harty Conflict Consulting and Mediation.

This Summary Report represents our efforts to synthesize the views and recommendations offered by workshop participants during workshop discussions (captured on flip charts) as well as written comments submitted at the workshops or shortly thereafter via email. The report

---

<sup>1</sup> This definition was derived from Salmon 2100: The Future of Wild Pacific Salmon, published in 2006 and edited by Lackey et al.

focuses on key themes heard over the course of the workshops. The report is not intended to serve as a transcript of all issues discussed or points made.

### Workshop Outreach and Participation

To help ensure participation by interested members of the public, OPC staff sent announcements to the entire OPC mailing list of approximately 4,000 agencies, organizations, and individuals. The facilitation team also developed a list of approximately 200 individuals who have been active on salmon issues in the past. These individuals, who represented a broad range of stakeholder interests, received email invitations to the workshops and many received follow-up calls. Additionally, news releases for the workshops were sent to local media in advance and announcements were posted on the OPC's website.

The approximately 80 workshop participants (about 40 each in Sausalito and Eureka) represented multiple interests and perspectives related to salmon. Participation by interest group category was approximately as follows.<sup>2</sup>

Interest Group Category	Approx. Number of Participants	Interest Group Category	Approx. Number of Participants
Commercial fishing	8	Conservation groups/NGOs	20
Recreational fishing	5	Tribes	2
Academic (scientists/researchers)	4	Consultants	10
Agencies (local, state, and national)	25	Citizens/unaffiliated	6

A list of workshop attendees is found in Appendix B.

### SUMMARY OF KEY OUTCOMES

Key outcomes from the workshops are summarized in the following bullets. These outcomes are discussed in greater detail in the sections below.

- Participants identified *four primary causes* for the long-term decline of wild salmon populations: water supply (including flow and timing), barriers, water quality, and habitat alteration.
- When asked to recommend *policy objectives* for salmon, workshop participants identified the following as key elements: (1) sustainable populations, (2) a harvestable surplus, (3) numerical goals (such as the existing doubling goal) to measure progress, (4) thoughtful definitions of terms such as “sustain,” “protect,” or “recover” that accommodate multiple species in a stream, and (5) attention to the full range of salmon populations across the state.
- When asked to recommend *strategies* to achieve these objectives, workshop participants focused their attention on addressing the four primary causes of wild salmon population decline identified in the first bullet above.
- Workshop discussions of potential strategies to address water supply needs highlighted two approaches: one focused on *enforcing existing laws* such as sections of the Fish &

<sup>2</sup> Note: not everyone signed in.

Game Code and Water Code, and a second focused on *re-structuring* the state's system of water use to ensure adequate supplies for salmon.

- Participants in both workshops consistently emphasized the fundamental importance of “political will” to achieving salmon objectives. Salmon's long-term decline reflects a failure to include salmon needs in policy and political decision making that must change according to this view.

## **VIEWS ON PRIMARY CAUSES OF WILD SALMON POPULATION DECLINE**

One of the main goals of the workshop was to take stock of workshop participant views on the primary causes of long-term wild salmon population decline. OPC staff compiled a list of key causes in advance of the workshops and used these to prepare a straw ballot (see Appendix C). Each workshop participant was asked to select what they viewed to be the three most important causes from the list.

The key causes listed on the ballot were (in no particular order):

- Invasive species -- e.g., striped bass
- Ocean conditions -- e.g., Pacific decadal oscillation
- Barriers -- e.g., dams, culverts
- Water quality -- e.g., sediment, temperature, nutrients, salinity
- Predation -- e.g., by sea lions, birds, other fish
- Water supply, impacts on flow and timing -- e.g., caused by exports, diversions (e.g., agricultural or municipal)
- Over-fishing/Over-harvest
- Salmon hatcheries & supplemental stocking -- e.g., leads to competition with wild salmon
- Habitat alteration -- e.g., development, forestry, agriculture
- Climate change
- Other?

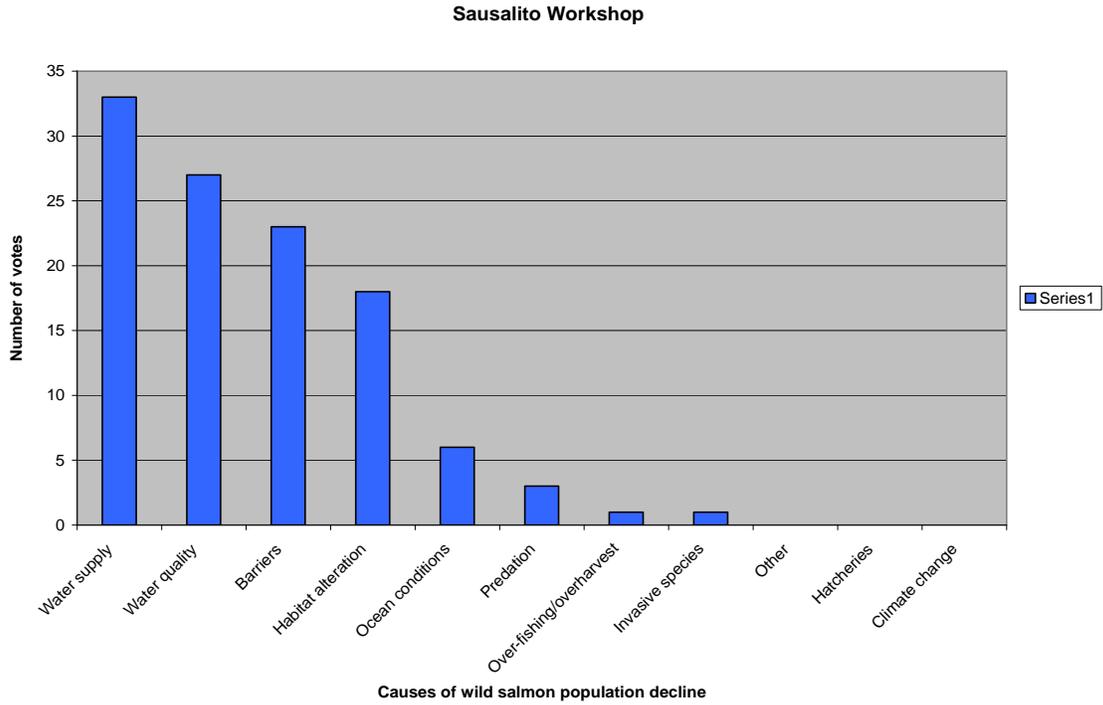
Results of the straw polls at each workshop were compiled and shared with participants.

### **Key Outcomes**

The results for both workshops were notably consistent. Participants identified water supply, water quality, barriers, and habitat alteration as four significant causes of long-term decline. Water supply and barriers were in the top three at both workshops; water quality was in the top three at the Sausalito workshop, and habitat alteration was in the top three at the Eureka workshop. All four received significantly more votes than other possible causes. These results are illustrated below.

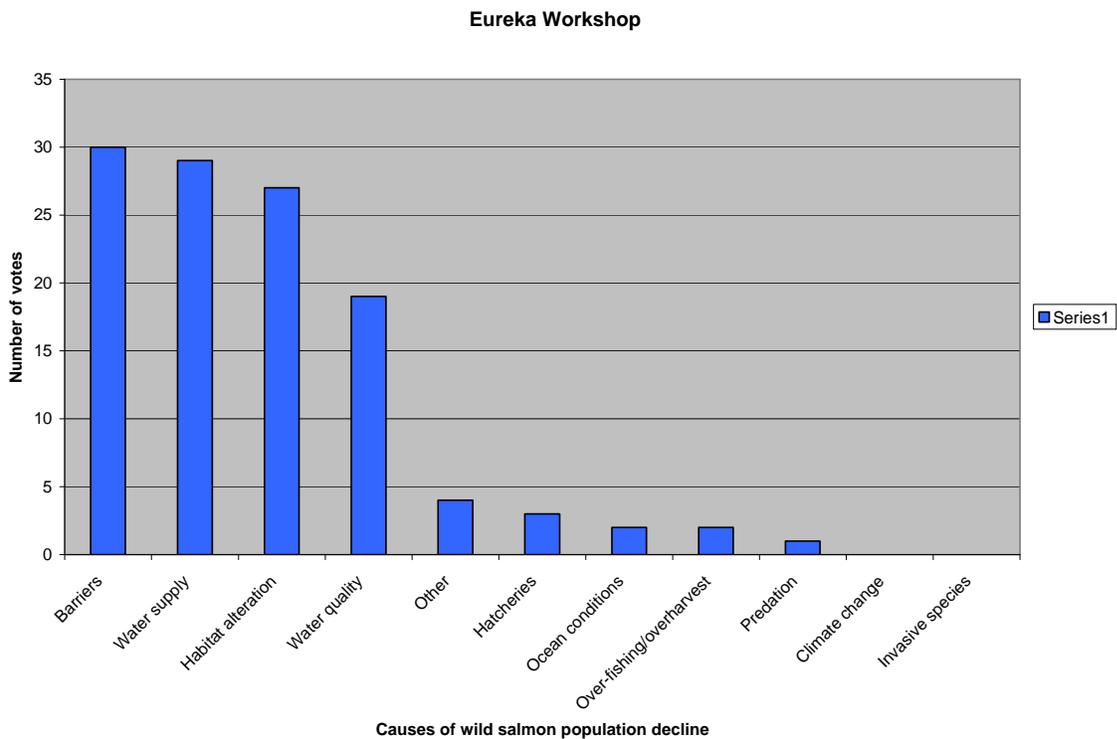
In the Sausalito workshop, water supply, water quality, and barriers were the top three vote-getters as shown in Table 1 below. The left-hand scale is the number of votes.

Table 1: Results of straw ballot exercise on causes of wild salmon population decline from the Sausalito workshop.



In the Eureka workshop the top three vote-getters were barriers, water supply, and habitat alteration as shown in Table 2 below.

Table 2: Results of straw ballot exercise on causes of wild salmon population decline from the Eureka workshop.



Four participants at the Eureka workshop selected "other" causes.<sup>3</sup>

This straw poll was not intended to be scientific. Instead, it was designed to engage participants in an exercise focused on thinking about the top causes of salmon decline. And it was intended to provide the OPC with an idea of what participants in two public workshops in different parts of the state believe to be the primary causes of decline.

## **POLICY RECOMMENDATIONS TO IMPROVE CALIFORNIA'S WILD SALMON PROTECTION**

A second main goal of the workshops was to solicit recommendations from participants on how to improve California's wild salmon protection policy. Participants were asked to consider and respond to the following three questions:

If you were the OPC:

- What would be your *objectives* for California's policy on wild salmon protection?
- What *strategies* would you implement to achieve these objectives?
- How can the OPC use its leadership to *support* what is working and *encourage change* where it is needed?

This part of the workshops was structured as a facilitated discussion, with opportunities for clarifying questions and follow-up comments from participants and OPC staff. The facilitation team took notes on flip charts, and OPC staff kept computer notes for comparison purposes. To ensure accuracy and maximize input, workshop participants were asked to submit written responses to the three questions on comment forms. The workshop agenda provided time to write comments, and participants also were able to send comments via email following the workshops. The sections below summarize key themes we heard in the discussion; they do not list all the objectives and strategies offered by workshop participants. A more complete list of the individual comments offered at and following the workshop, both orally and in written format, may be found in Appendix D.

### **Key Outcomes**

Participants at both workshops offered numerous recommendations for objectives and strategies, both during the workshop discussions and in written submissions to the OPC. This section summarizes those recommendations to assist OPC staff in briefing the OPC at their September 11 meeting.

The facilitation team used their judgment in organizing the workshop input; some recommended "objectives" have been re-classified as "strategies," and others have been combined where substantially similar. In each case, the intention was to preserve the commenter's basic idea.

### **Recommended policy objectives**

Policy objectives recommended at the Sausalito workshop:

- Double salmon population, as established in SB2261. This objective exists in California's Fish and Game code<sup>4</sup>, and was originally recommended by the California Advisory

<sup>3</sup> The "other" causes mentioned included: enforcement of water laws, economic drivers, disruption in the food chain, and more specific versions of the general causes above.

<sup>4</sup> See, e.g., Section 2761(g).

Committee on Salmon and Steelhead in a 1988 report. The Central Valley Project Improvement Act of 1992 (CVPIA) established a federal goal of doubling anadromous fish populations in the Central Valley.

- Double wild salmon populations and create a production goal of 15-25 million lbs/year. Note: there was broad support for a sustainable harvest production goal.
- By the next generation (2040), recover our salmon populations (note: the definition of “recovery” requires further discussion)
- Enhance and increase wild salmon (i.e., we need to do more than “protect”).
- By 2020, ensure that all California salmonid stocks are either de-listed or on schedule.

Policy objectives recommended at the Eureka workshop:

- Ensure healthy wild salmon throughout their range
- Ensure sustainable populations of salmon with a harvestable surplus for commercial, sport, and tribal fisheries (i.e., robust fisheries and sustainable populations). A sustainable population applies to all species in streams, not just harvestable species. Note: This objective received support from multiple participants, and no one expressed opposition when invited to do so.
- Get fish to the ocean alive

The workshops also generated advice about rebuilding salmon stocks from the most “viable populations” and restoring viable populations. Questions implied but not specifically explored at the workshops included: what constitutes a viable population, where those viable populations might be, or whether viability should be a criterion.

There was also advice about the need to establish objectives for different regions, identified as Central Valley, Klamath, and coastal (Coho and Chinook). An overall objective of doubling or sustainable harvests likely would be linked to specific populations, but this linkage was not developed at the workshops. See the section on recommended strategies below for more on this topic.

*Facilitation Team Observations:* There appears to be notable consistency among the policy objectives offered at the two workshops on the following key points:

- Sustainable harvest is part of a long-term policy (i.e., avoid “museum fish”).
- Population target numbers should be set to measure progress.
- A broad definition of protection is needed.

## **Recommended strategies**

Workshop participants offered a variety of strategies to achieve salmon policy objectives. In some cases, strategies were linked explicitly to particular objectives. In most cases, they were offered as a means to ensure the more general objective of healthy wild salmon populations.

This section summarizes key strategies offered in both workshops.

### Address the primary causes of salmon population decline

The most commonly mentioned strategies were directly related to the perceived causes of salmon population decline explored earlier in the workshop. Workshop participants consistently identified strategies that effectively mirrored the four most commonly identified causes of

decline: water flow, barriers, water quality, and habitat alteration. There was broad support for policies that would:

- **Ensure sufficient water flows and timing.** Most proponents of this strategy pointed out the diminished flows in historic salmon waterways due to diversions (e.g., for agriculture) or exports. Some participants also noted the potentially important role of water conservation here—agricultural, individual, and municipal/industrial through reclamation of grey water. The San Francisco Bay-Delta came up frequently in comment forms as an example of an area where much could be achieved from water conservation.
- **Eliminate barriers so that fish can get to the ocean and back.** Workshop participants cited a need to eliminate barriers (e.g., dams and culverts) for multiple reasons including improving water quality and access to habitat. Proponents of barrier removal often used the lower four Klamath River dams as a primary example of justifiable barrier removal. Many other barriers exist throughout salmon territory.
- **Ensure water that is clean and cold.** Proponents of this strategy pointed out that fish not only need enough water, but clean water. These individuals noted that many TMDLs<sup>5</sup> are being developed or implemented that should have a positive long-term impact on salmon populations.
- **Ensure there is sufficient good habitat for spawning and rearing.** Participants who support access to high quality habitat as a strategy recommended a holistic, headwaters-to-ocean view of salmon habitat. One element of this strategy would be increasing local participation in habitat restoration efforts through local watershed boards and tax incentives.

Much of the workshop discussion focused on two particular approaches to implementing the above strategies. One strategic approach focused on *enforcing existing laws*, such as sections of the Fish & Game Code and Water Code. Examples cited in the workshops include Fish and Game Code 5937, which deals with flows to support fish passage,<sup>6</sup> and other Fish and Game Code sections that address streambed alteration. Other examples offered by participants include Water Code sections that govern non-point source pollution, and state law mandating the protection of Endangered Species Act-listed species as examples of opportunities for improved enforcement.

Advocates for this approach cited two obstacles to success: a lack of *funding*, and a lack of *political will*. Lack of funding leaves agencies without staff and other resources required for effective enforcement. Lack of political will reflects relative influence and choices about values among elected officials, executive branch agencies, and the public. Water use historically has been dominated by agricultural and urban interests, and these interests have demonstrated the ability to block steps to support salmon that they perceive as threatening their interests.

A second approach focused on *re-structuring the state's system of water use* to ensure adequate supplies for salmon. Advocates for this approach noted that critical water supply choices, including the development of laws regulating water use, historically reflected values

<sup>5</sup> Total Maximum Daily Load, pursuant to the federal Clean Water Act.

<sup>6</sup> The applicable text in Fish and Game Code 5937 reads: "The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam, to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of the department, it is impracticable or detrimental to the owner to pass the water through the fishway."

that did not adequately protect salmon. Many use rights were established in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries at a time when there were fewer concerns about salmon. The “use it or lose it” requirement of state water rights was cited as one example of outdated policy. One proposed change was to treat in-stream “salmon flows” as a beneficial use under state law. There also were suggestions that simply revising existing laws was insufficient, and that the state needs new laws to provide necessary tools to protect salmon. No specific examples were provided.

*Facilitation Team observation:* The relationship between these two approaches was not explored to any great extent in the workshops. It is not clear whether (1) they are in tension and mutually exclusive (either one or the other), (2) represent a potential progression (first fund and enforce, then replace if necessary), or (3) could be integrated (some structural change combined with better funding and enforcement).

One final note: a few workshop participants focused on a strategy that was not associated with the top four primary causes of wild salmon population decline—the role of hatchery fish. These participants proposed marking all hatchery fish, and eventually eliminating harvest of wild fish. Only the harvest of hatchery fish would be allowed.

#### Adopt a regional approach

Another key point made at both the Sausalito and Eureka workshops is that strategies may differ by region. Participants suggested that alternative strategies be developed for the Central Valley, the Klamath River basin, and coastal Coho and Chinook streams. Increased regional coordination between land planners and marine planners was recommended, with one example being the Coast and Ocean Roundtable.

*Facilitation Team observation:* The workshops did not explore the significance of regional distinctions as they relate to salmon populations and an overall salmon policy objective. For example, how would a doubling (or similar) goal be allocated across the salmon populations in these regions?

#### Establish refugia

Another strategy that received some attention was creation of “refugia,” or a prioritization and protection of “last, best places,” although participants did not discuss possible locations in any depth. Opposition to a refugia strategy was not apparent at the workshops, but the question was not posed directly to participants. Participants noted that a refugia strategy might not adequately support a policy objective focused on creating a harvestable surplus of salmon.

#### Administrative and procedural strategies

Workshop participants recommended several other strategies that were more administrative or procedural in orientation. These included the following:

- The state should better integrate salmon objectives into the overall framework for water management. This could include the current Integrated Regional Water Management Planning process currently underway, as well as Bulletin 160, the State Water Plan.
- Steps should be taken to ensure that salmon policy is a higher priority for state decision makers. One suggestion was to appoint a “salmon czar” at the cabinet level. Another was to create salmon advocate positions within DFG and SWRCB. A third suggestion

was to elect executive branch decision makers rather than appoint them, e.g., Director of the Department of Fish & Game. A fourth was to create positions on the Board of Forestry and State Water Resources Control Board for salmon fishery representatives.

- A blue ribbon task force along the lines of those created for the Marine Life Protection Act and Delta Vision and an associated scientific panel should be appointed to develop salmon recommendations. These process suggestions received mixed support among workshop participants, with some citing a history of these types of panels and their recommendations being ignored. A similar recommendation was to create a “California Salmon Fund” modeled after the Commercial Salmon Stamp.
- Public education and input also received attention. One aspect is the need for broader public education about water, salmon, and people. A second is the importance of local support to maximize the long-term effectiveness of a salmon policy.
- The state should improve interagency communication by, for example, standardizing data collection methods among agencies.
- Take steps to improve science and monitoring of salmon, as this is a key component of adaptive management.
- Invest in maintaining the commercial salmon fleet. The proponents of this strategy point out that salmon fishermen are the ones doing much of the work to protect salmon.

### What the OPC can do

Workshop participants were challenged to identify specific actions appropriate to the OPC to support California’s salmon policy. Nevertheless, many people pointed to the OPC as having the capacity to generate the *political will* necessary to implement an effective salmon policy. Without that political will, workshop participants expressed serious doubts that current salmon issues could be successfully addressed.

Participants suggested the following roles for the OPC:

- *Advocate for a new state salmon policy.* Take the lead in encouraging the Governor to design and implement a new state policy for salmon.
- *Advocate for agency funding and effective enforcement of existing laws related to water and salmon.* The OPC could be effective in generating the political will needed to ensure agencies are adequately staffed and that existing laws are enforced.
- *Advocate for a re-structuring of the state’s laws on water use.* This could entail proposing creation of a high-level commission resembling current Blue Ribbon Task Force models.
- *Advocate for structural change to increase the role of salmon policy in state decision making.* The OPC could, for example, advocate for creation of a cabinet-level salmon czar, as noted above.
- *Support an elevated role for the CA Advisory Committee on Salmon and Steelhead.* The OPC could fund, or support funding for, the Advisory Committee.

- *Re-frame the issues.* The OPC could take the lead in re-framing the salmon discussion away from *people vs. fish*. The OPC could point out the importance of salmon for people, and emphasize that the issue is really about people vs. people.
- *Continue to provide opportunities for increased communication.* The OPC could support dialogue among stakeholders and between policy makers and stakeholders.

## **NEXT STEPS**

Drew Bohan (OPC) closed the workshops by thanking participants for their contributions. He confirmed the following key next steps from the workshop:

- OPC staff will brief the Council members on the outcomes of the August 2008 wild salmon protection workshops at the OPC's September 10-11, 2008 meeting in Half Moon Bay.
- OPC staff will use the outcomes of the workshop to inform the development of specific wild salmon policy options for consideration by the OPC at a future OPC meeting.

## APPENDIX A

### Agenda Wild Salmon Protection Workshop Convened by the California Ocean Protection Council (OPC)

Bay Model Visitor's Center Sausalito, CA August 14, 2008 from 2:00-4:00 PM	Agricultural Center Eureka, CA August 26, 2008 from 6:00-8:00 PM
----------------------------------------------------------------------------------	------------------------------------------------------------------------

#### Workshop Goals:

- Take stock of primary causes of wild salmon population decline
- Gather recommendations from members of the public on objectives and strategies for improving California's wild salmon protection policy

#### Agenda

##### Sign In

##### A. Welcome and introductions (5 min)

1. Introduce California Ocean Protection Council (OPC)

##### B. Review workshop goals and focus (10 min)

##### C. Take stock of primary causes of wild salmon decline: Plenary (25 min)

1. Review guiding question:
  - a. In your view, what are the top three causes of the decline of salmon populations in California? Note: The focus is statewide rather than on a particular region or basin.
2. Review OPC list of potential causes; clarify meaning of terms
3. Conduct straw voting exercise using paper ballots; collect ballots and compile answers for reporting back at end of workshop

##### D. Solicit input on California's policy for wild salmon protection (65 min)

1. [Plenary discussion] Make recommendations to improve California's wild salmon protection policy (50 min)
  - a. If you were the OPC, what would be the **objectives** for California's policy on wild salmon protection?
  - b. What **strategies** would you implement to achieve those objectives?
  - c. How can OPC use its leadership to **support** what is working and **encourage change** where it is needed?
2. Complete comment forms; address above questions (15 min)

##### E. Wrap up and next steps (15 min)

1. Collect comment forms
2. Report back on outcomes of straw voting exercise
3. Describe next steps
  - a. Prepare workshop summary report
  - b. Brief OPC on wild salmon issues

## APPENDIX B

### Salmon Workshop Attendee Lists

#### Sausalito Workshop Attendee List:

Name	Affiliation
Neil Lassetre	Stillwater Sciences
Larry Collins	SF Crab Boat Owners
Mike McGowan	Maristics
Tom Dey	WSP
Dick Pool	Pro-Troll
Neal Fishman	OPC
Cina Loarie	OPC
Monica Hunter	PCLF
Tom Lyons	CA Coastkeeper Alliance
Linda Sheehan	CA Coastkeeper Alliance
Betsy Aceti	Cal Coast
Tim Martin	Recreational Fishing Alliance
Pete Adams	NMFS
Dan Wolford	Coastside Fishing Club
Jim Anderson	Half Moon Bay
Derek Hoye	DOI - OEPC
Ed Thor	Tiburon Salmon Institute
Chuck Bonham	Trout Unlimited
Duncan Maclean	HMB Fisherman's Association
Zeke Grader	PCFFA
Karyn Geer	State Coastal Conservancy
Sam Schuchat	State Coastal Conservancy
Chris Pincetich	SPAWN
Jennifer Roth	PRBO
Ernie Koepf	Oakland
Tom Raftican	UASC
Patrick Rutten	NOAA
G. Rurhs	TYEE
Barbara Stickel	California Advisory Committee on Salmon and Steelhead Trout
Paul Johnson	Monterey Fish
Sabrina Simpson	Stillwater Sciences
Bruce Orr	Stillwater Sciences
Toby Garfield	SFSU/RTC
Jennifer Simon	CDFG-OSP
Keith Weissglass	Ocean Conservancy
Amber Mace	OST
Jim M.	PRBO
Mel J.	TYEE
Bud St. Onge	TYEE
Steve Aceti	California Coastal Coalition
Catherine Kuhlman	RWB
April Wakeman	UASC

**Eureka Workshop Attendee List:**

<b>Name</b>	<b>Affiliation</b>
Melissa Scott	WSP
Karyn Gear	SCC
Paula Yoar	Self/RRWC
Sam Price	WSP
Keytra Meyer	Mattole Salmon Group
Seth Zuckerman	Mattole Salmon Group
Jack Larson	Smith River Advisory Council
Melvin McKivney	NEC
Sue Leskiw	Sierra Club
Diane Beck	Sierra Club
Tom Shaw	FWS
Mike Long	FWS
Mitch Farro	PCEWWRA
Dean E.	STMA
Elizabeth T.	
Dave Hankin	HSU Fish
Bruce Gordon	NRCS
Mark W.	California Department of Fish and Game
Jim Waldvogel	California Sea Grant
Thomas Dunklin	TBO Productions
Tim Ash	CalTrans
S. Craig Tucker	Karuck Tribe
Mike Belchik	Yurok Tribe
Dirk Petersen	Stillwater Sciences
Tom Weseloh	Cal Trout
Bill Pinnix	USFWS
Regina Chichizola	Klamath Riverkeeper
Jimmy Smith	Humboldt Board of Supervisors
Vivian Helliwell	PCFFA
Dave Bitts	PCFFA
Tim Klassen	
Aaron Newman	Humboldt Fisherman's Associations
Nancy Dean	NOAA/NWS
S. Krammer	H. T. Harvey and Association
Frank Lison	Stillwater Sciences
Eli Asarian	Kier Associates
Denver Nelson	
Mike Hart	

## APPENDIX C

### Straw Ballot

#### Public Views on Primary Causes of Wild Salmon Population Decline

#### Wild Salmon Protection Workshop

August 14, 2008 – Sausalito, CA

August 26, 2008 – Eureka, CA

#### Purpose:

- The purpose of this voting exercise is to take stock of current public views on the primary causes of wild salmon population decline in California. This is not intended to be a rigorous scientific analysis, but more of an informal survey of public opinion
- The focus is statewide rather than on a particular region or basin
- The results of the straw voting exercise will be reported back at the end of the workshop

#### Straw Voting Instructions:

1. Place an "X" in the grey boxes next to each of what you consider to be the **top 3 causes** of wild salmon population decline. Ballots with more than 3 "Xs" will not be counted.
2. The ballots will be collected by OPC staff and the results tallied.
3. OPC staff will report the results of the voting at the end of the workshop.

#### Key Causes\* of Wild Salmon Population Decline:

<b>Causes (in no particular order)</b>			
Place an "X" in the grey boxes next to what, in your view, are the <b>top 3 causes</b> of wild salmon population decline in California			
<input type="checkbox"/>	Invasive species (e.g., striped bass)	<input type="checkbox"/>	Water supply impacts on flow and timing (e.g., caused by exports, diversions (e.g., agricultural, municipal))
<input type="checkbox"/>	Ocean conditions (e.g., Pacific decadal oscillation)	<input type="checkbox"/>	Over-fishing/over-harvest
<input type="checkbox"/>	Barriers (e.g., dams, culverts)	<input type="checkbox"/>	Salmon hatcheries/supplemental stocking
<input type="checkbox"/>	Water Quality (e.g., sediment, temperature, nutrients, salinity)	<input type="checkbox"/>	Predation (e.g. sea lions, birds, other)
<input type="checkbox"/>	Habitat alteration from sources other than above (e.g., development, forestry, agriculture)	<input type="checkbox"/>	Other (please explain)
<input type="checkbox"/>	Climate Change	<input type="checkbox"/>	

\*OPC staff developed this list from a much broader list of causes identified in *Salmon 2100: The Future of Wild Pacific Salmon* (Lackey et al. 2006). The above list was refined during phone interviews with a diverse mix of stakeholders familiar with wild salmon protection issues.

#### How Would You Best Describe Your Affiliation?:

<b>Affiliation</b>					
Place an "X" in the grey box next to your closest affiliation					
<input type="checkbox"/>	Commercial Fishing	<input type="checkbox"/>	Recreational Fishing	<input type="checkbox"/>	Government Agency
<input type="checkbox"/>	Conservation Group	<input type="checkbox"/>	Scientist/Researcher	<input type="checkbox"/>	Other Fishing Industry
<input type="checkbox"/>	Environmental Consultant	<input type="checkbox"/>	Native American Tribes	<input type="checkbox"/>	Other: _____

## APPENDIX D

### Recommended Improvements to State Policy on Wild Salmon Protection

Wild Salmon Protection Workshops  
August 14, 2008 – Sausalito, CA

Appendix D contains a summary of the recommendations for improving salmon policy in California (objectives, strategies, and what OPC can do) offered at the Sausalito and Eureka workshops. The tables below recap comments recorded on flip charts as well as those submitted on written comment forms. Most of the written comments were transcribed verbatim, although some have been modified and shorted for clarity.

#### Sausalito Flipchart Notes:

##### Questions posed:

1. If you were a member of the OPC, what would be the objectives for California's policy on wild salmon protection?
2. What strategies would you implement to achieve those objectives?
3. How can OPC use its leadership to support what is working and encourage change where it is needed?

Objectives	Strategies	What OPC can do
<ul style="list-style-type: none"> <li>• Double salmon population (several people mentioned this)</li> </ul>	<ul style="list-style-type: none"> <li>• Implement and enforce the law</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage Governor to take action (emergency action or directive)</li> <li>• Provide funding to support</li> </ul>
<ul style="list-style-type: none"> <li>• Increase water in Delta</li> </ul>	<ul style="list-style-type: none"> <li>• Make salmon part of Delta management</li> <li>• Reduce pumping for exports</li> <li>• Get water from other sources</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Double wild salmon populations, and create production goal of 15-25 million lbs/year</li> </ul>	<ul style="list-style-type: none"> <li>• Need different strategies for three different parts of the state</li> <li>• 1. Central valley. Most important watershed for salmon in CA. End over-draught (e.g., by sending less water to Westlands for agriculture). Address water quality. Address flow first, then take down barriers. Taking down some small dams can have a big impact</li> <li>• 2. Klamath basin. Remove 4 dams. Implement and enforce TMDLs.</li> <li>• 3. Coastal: address coho salmon and coastal Chinook. Dam removal, reduce agricultural diversions, roads</li> </ul>	<ul style="list-style-type: none"> <li>• Have the CA Advisory Committee on salmon and steelhead issue a report.</li> <li>• OPC can get funding for the Advisory Committee, as DFG won't</li> <li>• Take a leadership role: improve the leadership in DFG and DWR. This is an act of "political will". Can be done through better appointments.</li> </ul>
<ul style="list-style-type: none"> <li>• Increase water</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce waste and unreasonable</li> </ul>	<ul style="list-style-type: none"> <li>• These actions are an act of "political</li> </ul>

supply (more water for salmon)	<p>use</p> <ul style="list-style-type: none"> <li>• Address overappropriation on rivers</li> <li>• SWRCB needs to implement the law/code and enforce water rights</li> <li>• Increase funding to SWRCB so they can do their job</li> <li>• Improve water conservation (grow appropriate crops, urban conservation, ag conservation)</li> </ul>	<p>will". OPC can help encourage this.</p> <ul style="list-style-type: none"> <li>• Need to reframe issue from fish vs. people to people vs. people.</li> </ul>
• Remove barriers	<ul style="list-style-type: none"> <li>• Low hanging fruit exists</li> <li>• Pursue replacement of small culverts in priority watersheds</li> </ul>	•
• Improve WQ	<ul style="list-style-type: none"> <li>• Implement and enforce existing laws (Porter-Cologne)</li> </ul>	•
• Summary: "Fish need water and clean water"	•	•
• Habitat restoration? (not clearly stated)	<ul style="list-style-type: none"> <li>• Establish federal tax credits for restoration on private lands</li> </ul>	•
• More water for salmon	•	•
<ul style="list-style-type: none"> <li>• "By next generation (2040), recover our salmon populations"</li> <li>• Still need to work out what "recover" means here</li> </ul>	<ul style="list-style-type: none"> <li>• Each region has different strategies</li> <li>• Implement these 4 key strategies <ul style="list-style-type: none"> <li>a. Protect: save the last, best places (e.g., San Mateo Creek)</li> <li>b. Reconnect by improving stream flow and removing barriers</li> <li>c. Restore: target impaired areas</li> <li>d. Sustain</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• OPC can do some things to help operationalize these strategies: <ul style="list-style-type: none"> <li>• 1. Advocate creation of a new state policy for salmon</li> <li>• 2. Advocate creation of office of public advocates in DFG/SWRCB</li> <li>• 3. Encourage agencies to better manage funds to achieve their missions. This could be achieved legislatively</li> <li>• 4. Prioritize</li> </ul> </li> </ul>
• Restore salmon	<ul style="list-style-type: none"> <li>• Educate the public about water resources</li> <li>• Take steps to protect the salmon fishery: Use limited entry salmon permits to allow salmon fishers to fish for rockfish by hook/line. Fishers have been the biggest advocates for salmon; don't let them all go out of business</li> <li>• Improve the effectiveness of state/federal agencies: DFG, SWRCB, Board of Forestry</li> </ul>	•
• Not stated	<ul style="list-style-type: none"> <li>• Provide funding to people doing restoration projects. Problem: no direct funding for salmon exists</li> </ul>	•
• Not stated	<ul style="list-style-type: none"> <li>• Focus on San Joaquin River</li> </ul>	•
• Not stated	<ul style="list-style-type: none"> <li>• Build a legislative replacement for the ESA, in case the law is repealed</li> </ul>	•

<ul style="list-style-type: none"> <li>Enhance and increase wild salmon (i.e., we need to do more than “protect”). Do this by addressing core issues like water flow and dams</li> </ul>	<ul style="list-style-type: none"> <li>Restore flow/timing</li> <li>Remove dams</li> <li>Use hatcheries for restoration</li> <li>Recognize that some policies have failed (e.g., hatcheries as mitigation for dams, Delta policy)</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Not stated</li> </ul>	<ul style="list-style-type: none"> <li>Try a large scale experiment: let water flow through the Delta for 10 years</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Integrate salmon recovery into water management planning</li> </ul>	<ul style="list-style-type: none"> <li>Integrate salmon recovery into Integrated Regional Water Management Plans (Bulletin 160 process), flood control policy, Delta Visions</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Address the Delta, which is critical for central valley stocks</li> </ul>	<ul style="list-style-type: none"> <li>Establish minimum flows through the Delta</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Address predation</li> </ul>	<ul style="list-style-type: none"> <li>Learn more about this cause</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Not stated</li> </ul>	<ul style="list-style-type: none"> <li>Augment funding (create a CA salmon fund)</li> <li>Put a fishery representative on the Board of Forestry</li> <li>Put a fishery representative on the SWRCB</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## Sausalito Comment Form Summary

### Purpose:

- The purpose of this comment form is to provide workshop participants with the opportunity to recommend appropriate state objectives and strategies to improve the protection of California’s wild salmon populations
- Input from these comment forms will be compiled and summarized in the workshop summary report, and will be used to inform the briefing of the OPC on the topic of wild salmon protection

### Questions:

- If you were the OPC, what would be the **objectives** for California’s policy on wild salmon protection?
- What **strategies** would you implement to achieve those objectives?
- How can OPC use its leadership to **support** what is working and **encourage change** where it is needed?

Objective	Strategy	OPC Actions
<b>Water Quality</b>		
<ul style="list-style-type: none"> <li>Improve water quality (many respondents included this as an objective)</li> </ul>	<ul style="list-style-type: none"> <li>Review and revise Clean Water Act to eliminate “use it or lose it” policy and provide incentives for wise use</li> <li>Cut out inappropriate subsidies</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

	<ul style="list-style-type: none"> <li>• Remove barriers (dams, culverts, etc.)</li> <li>• Reorganize water usage/management agencies and change focus from water diversions to water preservation and protection of for salmon – new management agency</li> <li>• Encourage improved water usage through conservation (several respondents included this strategy)</li> </ul>	
<ul style="list-style-type: none"> <li>• Identify and mitigate top priority water quality problems (fine sediment, diverted water temperature, toxins, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Implement existing water quality regulation and provide/leverage funding for restoration activities on private land and improve land use practices (roads, agricultural, forestry, aggregate mining, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Integrate salmon recovery goals into the planning documents and funding programs that shape freshwater supply and flood management, particularly those that guide local and regional actions</li> </ul>	<ul style="list-style-type: none"> <li>• Specific objectives for salmon in the Integrated Regional Water Management Program, State Water Plan (Bulletin 160), and State plan of flood control (prop 1E)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Change the State’s water management and quality control policies to the degree that salmon are able to successfully spawn and migrate to the ocean in sufficient numbers to accomplish restoration of endangered and non endangered runs</li> <li>• Curtail delta pumping enough (to 4 to 4.5 mm acre feet overall) to reduce the huge direct and indirect impact these pumps currently have on smolts.</li> <li>• Change the water movements and conditions in the upper rivers and the delta currently dictated by pumping schedules, so that salmon can survive. When cold water is needed provide it, when high flows are needed</li> </ul>	<ul style="list-style-type: none"> <li>• In the short range(2 to 5 years), produce a report showing the economic gains of expanded trucking operations bringing hatchery fish around the delta to San Pablo Bay. Include an analysis of the fishery impacts and an analysis of the potential strong positive economic impacts to the fishing industry, fishing communities and the state.</li> </ul>	<ul style="list-style-type: none"> <li>• Carefully review the recommendations of the NRDC Report “Fish Out of Water”. The recommendations are found on pages 26 through 29. There is a growing consensus that these recommendations can solve many of the salmon and water problems of the state.</li> </ul>

<p>provide them and once spawning is completed do not allow flows to be cut leaving the redds high and dry. These steps are needed for all runs and not just for the endangered fish.</p> <ul style="list-style-type: none"> <li>• Clean up the polluted delta such that the plankton and other food sources that salmon fry and smolts need to successfully traverse and survive the 100 miles of delta channels before they reach San Francisco Bay</li> </ul>		
<ul style="list-style-type: none"> <li>• Help find and secure sources for the substantial funding that will be required to implement the hundreds of projects that have been identified as necessary to recover and enhance the salmon runs. These projects include removing dams and barriers to open new spawning areas, additional screening, and the cleanup of polluted waters. Currently many projects have been identified but no funding is available</li> </ul>	<ul style="list-style-type: none"> <li>• In the funding area do a study and report on the best ways to fund the necessary projects for recovery. Options might include federal and State appropriations, fishery bonds, mitigation fees on pumping or a water tax on all the users of the public's water.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• California's policy on wild salmon needs to have a tangible deadline (how about 2020, a "clear vision of clear water") and a goal of restoration and recovery of fisheries, which includes the doubling goal. The policy should be tied to clean water and healthy rivers, so that all Californians understand that they benefit. Years ago, there was a bumper sticker that read "Salmon, Our</li> </ul>	<ul style="list-style-type: none"> <li>• Create a "California Salmon Fund" modeled after the Commercial Salmon Stamp. In Alan Lufkin's 1991 book, <i>California's Salmon and Steelhead: the Struggle to Restore an Imperiled Resource</i> (UC Press: Berkeley, 1990), pages 232-236 provide a concise history of not only the Commercial Salmon Stamp program but also the type of work they accomplished in their first five years. Sadly, today's program is just a shadow of its former self; supported by assessments on commercial salmon permits, as the number of</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage the Governor to appoint fishery persons well-versed in the needs of salmonids to boards and commissions that impact salmonid habitat. Of particular importance are the State Water Resources Control Board and the State Board of Forestry. Note that the State Board of Forestry has a specific "Range and Livestock" position, but no "Fishery and Wildlife" position. Californians are being denied their voice in issues critical to their State</li> </ul>

<p>Miner's Canary." As a renewable natural source of protein, salmon will only increase in value. There is no reason that salmon fisheries cannot be returned to historic levels, and their related economies will help revitalize many coastal communities Objective: All California salmonid stocks either de-listed or on schedule for de-listing by 2020, the doubling goal for Central Valley stocks (originally set for the year 2000) surpassed and California in full compliance with the Clean Water Act</p>	<p>permits dwindle, so does their funding and their ability to act. In the past, the Commercial Salmon Stamp fund was invaluable for its ability to work outside the strict guidelines of the federal and state restoration programs. For the California Salmon Fund to work, it would need to be governed by the same type of body and using the same principles as the Commercial Salmon Fund. To reduce administrative costs, the California Salmon Fund could simply augment the Commercial Salmon Fund.</p> <ul style="list-style-type: none"> <li>• Provide the initial funding needed to re-staff the California Advisory Committee on Salmon and Steelhead Trout ("CAC"), so that they may resume the work they were legislatively created to do: <i>ascertain, study and analyze all facts relating to the preservation, protection, restoration and enhancement of salmon and steelhead trout resources of this state, including, but not limited to, the operation, effect, administration, enforcement and needed revision of any and all laws in any way bearing upon or relating to the subject of this resolution, and to report thereon to the director, who shall submit such report to the Legislature, including in the report its recommendations for appropriate legislature.</i> (Senate Joint Resolution No. 19, Statutes of 1983.) Since 1992, the CAC has been unfunded and although their members have remained actively involved in salmon restoration issues, their lack of staffing and funding to report to the Legislature, their effectiveness, and hence California's salmonid resources, has declined. These annual reports are even more necessary than originally contemplated in order for today's rapidly-changing Legislature to remain well versed on an issue as complicated and</li> </ul>	<p>resources. The public seat on the State Water Resources Control Board will become vacant on January 15, 2009. As a good-faith showing of the political will needed to fix the "salmon problem," 2004 NOAA Environmental Hero and former Pew Commissioner Pietro Parravano should be considered for this position.</p> <ul style="list-style-type: none"> <li>• Direct the Board of Forestry to revisit their recent decision denying the emergency petition for protection of Coho salmon. Their decision was based on preliminary findings that the declines resulted from "ocean conditions" rather than any sort of freshwater habitat issues; the science used was not certain, and their decision was contrary to applicable laws and regulations on this issue</li> <li>• Provide the Political Will lacking in support of the existing programs. Enforcement of existing laws, funding of existing programs and committees, and recognition that California's salmonid resources are vitally necessary for all Californians – as the National Research Council explained in <i>Upstream, Salmon and Society in the Pacific Northwest</i> (National Academy Press: Washington, 1996:74): "the salmon problem is about more than just a few species of fish. It is a question of cultural values, stewardship, and living with the land instead of off the land."</li> </ul>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>critical as this. This is something that was working but has been seriously neglected.</p> <ul style="list-style-type: none"> <li>• Either a special request which waived the bonus Coho Recovery Plan point and focused on Chinook recovery, preferably not in the Scott/Shasta area, or a one-time waiver of this bonus point for the next funding round, could pick up some of the projects that have been slipping through this crack and be of long-term benefit to restoring ocean fisheries. → The Salmon Restoration Grants Program ranks all proposals on a scale of one to four, with four being the best. Restoration actions specifically identified in the Coho Recovery Plan get a full point as a bonus. There are some projects that fall through the cracks because either they do not impact coho or the actions are not specifically identified in the plan. In the recent past, DFG has held special requests for proposals, favoring (1) projects on the Scott/Shasta Rivers, and (2) fire-damaged sites.</li> <li>• There are no watersheds containing Coho that aren't listed but some watersheds (very few) either do not contain Coho or do not have specific restoration actions identified (many) which would provide the Coho point given to restoration actions that are identified specifically in the Coho recovery plan. This is a flaw that could be fixed by identifying appropriate Coho recovery actions. During the Coho recovery planning process there was not enough time to list every Coho recovery action and some watersheds fared better than others. There is opportunity to update these recovery actions, and this needs to be revisited.</li> </ul>	
<b>Water Quantity/Supply</b>		
<ul style="list-style-type: none"> <li>• Improve water management and allocation</li> </ul>	<ul style="list-style-type: none"> <li>• Implement existing laws and regulations</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<ul style="list-style-type: none"> <li>• Increase water quantity – Provide clean, cold water for salmon</li> </ul>	<ul style="list-style-type: none"> <li>• Reorganize water usage/management agencies and change focus from water diversions to water preservation and protection of for salmon – new management agency</li> <li>• Encourage improved water usage through conservation (several respondents included this strategy)</li> <li>• Enforce required water mitigation stipulations</li> <li>• Legislation to put water for salmon first</li> <li>• Work to ensure other state and federal agencies enforce laws that are in place</li> <li>• Focus energy on headwaters to ocean</li> <li>• Create incentives for cities/businesses to use reclaimed water (e.g. guaranteed source, creates jobs)</li> </ul>	<ul style="list-style-type: none"> <li>• Lead state towards salmon protection agenda in management of water supply storage, storm water, flood control, storage, etc.</li> <li>• Propose larger scale ecological experiments: adaptive management (e.g. unimpeded flow through delta for 10 years)</li> </ul>
<ul style="list-style-type: none"> <li>• Increase water in streams for salmon at the right time of year in key areas (Delta, key rivers/streams supporting salmon)</li> </ul>	<ul style="list-style-type: none"> <li>• Implement existing laws</li> <li>• Change certain aspects of western water law</li> <li>• Promote “small” scale storage in key areas to limit diversions in late spring through early fall (filling reservoirs during winter) especially in key costal watersheds</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Increase water through the Delta</li> </ul>	<ul style="list-style-type: none"> <li>• Stop over drafting on the salmon rivers</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Promote conservation under the current water appropriation contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the existing system as well as improve the "use it or lose it system" creating incentives for conservation over waste.</li> </ul>	<ul style="list-style-type: none"> <li>• Support and encourage the changes suggested by the Environmental Defense Fund</li> </ul>
<ul style="list-style-type: none"> <li>• Return salmon stocks to sustainable levels</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce water exports from the delta → buy out westland</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage the legislature to establish a watershed conservancy board that has “real power” over development, water policy, roads, timber, etc.</li> </ul>
<ul style="list-style-type: none"> <li>• Restore and enhance salmon – protection is not adequate or acceptable</li> </ul>	<ul style="list-style-type: none"> <li>• Restore water flow adequately and properly timed</li> <li>• Acknowledge up front that existing programs have not and are not working</li> </ul>	<ul style="list-style-type: none"> <li>• Work with the federal government to achieve a compromise on water issues – everyone seems to be fighting for water, the government has been overpowering in funding their special interests regarding the use of water</li> </ul>
<ul style="list-style-type: none"> <li>• Restore all the</li> </ul>	<ul style="list-style-type: none"> <li>• At the present time it does not</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<p>endangered and non endangered salmon runs to viable long term populations capable of contributing to a reasonable commercial and recreational harvest and also capable of surviving periodic adverse ocean conditions such as El Ninos and food chain disasters caused by insufficient upwelling or other nutrient problems. Viable populations mean spawning returns of at least four to five times the minimums needed for sub-species survival</p>	<p>appear that the political will exists in the Administration to support the strategies. My recommendation is a series of summary reports on salmon conditions by the OPC staff with reviews and discussions with the OPC board and the governor. There is a substantial bank of biological and economic data available that the staff could use as a basis for the reports. Reports are suggested to cover three levels of water management changes. The first would be status quo, the second - modest improvements and third full recovery mode. Three scenarios might be:</p> <ol style="list-style-type: none"> <li>a. Status quo - delta pumping, current upper river water flows and no delta pollution changes. Show the resulting impact on each run. This will show early extinctions.</li> <li>b. Court ordered changes in pumping, upper river water flows and some progress in pollution. This will show some improvement in endangered recovery but no change in non-endangered runs.</li> <li>c. Full changes in delta pumping and river operations along the lines proposed by NRDC plus implementation of the highest priority barrier removal and other projects recommended by NMFS, USFWS and DFG.</li> </ol> <ul style="list-style-type: none"> <li>• Along with these reports a request should be made to the governor to declare a salmon emergency and place priority actions on the most productive recovery plan.</li> </ul>	
<ul style="list-style-type: none"> <li>• Establish a State Priority for developing and using reclaimed water - more water could be realized, more inexpensively developed, and without public controversy if waste water treatment plants were developed to produce advanced 3rd stage wastewater. This</li> </ul>	<ul style="list-style-type: none"> <li>• Implement a State Wide Water Awareness Program That Focuses "Environmental Restoration"</li> <li>• Have the Governor initiate a "Manhattan Like Project" to develop either a target amount of reclaimed water (20M AF by 2020); or a target for reduction of Delta exports by 50% by 2020</li> <li>• Quit using our coasts and ocean as sewage dumps</li> </ul>	<ul style="list-style-type: none"> <li>• Support / Change in leadership and legal requirements –</li> <li>• Increase budgets for fisheries restoration</li> <li>• Increase water flow to sustain the benefits of restoration work</li> <li>• Utilize the Governor's public image and horsepower to encourage salmon restoration. It may not happen with another Administration and is a good</li> </ul>

<p>water could be applied directly, stored, or injected into aquifers as is currently being done by Orange County*</p>	<ul style="list-style-type: none"> <li>• Assume diversions and replumbing the Delta will never be the solution because there is no more water to divert at a certain point.</li> <li>• Treat water like oil, we can't pump our way out of the problem of an energy shortage. The cost of a "new" peripheral canal only buys time. It doesn't address the long-term problem of demand out stripping supply. The environmental wars will continue as long as diversions are viewed as a solution.</li> <li>• Develop large scale media campaign on educating people on the environmental effects of wasting water. Example: "Salmon and People"; Fish Friendly Water Use"; Create financial incentives to remove golf course turf and lawns in Southern California</li> <li>• Develop offstream reservoirs for storage and distribution of reclaimed water (agriculture and domestic water supply). Every major metropolitan area creates a reservoir. In some cases there may be a financial market for the product. - I had a discussion with the Sonoma County Water Agency and they indicate 400,000AF+ of water could quickly be developed in the bay Area through reclamation. That's more water than is stored in Lake Sonoma.</li> <li>• Educate the public on the merits of aquifer injection. Orange County only injects the reclaimed water to satisfy public perception.</li> <li>• Reclamation has to be more cost effective than building desalination plants.</li> <li>• Use economics to drive conservation and willingness to utilize reclaimed water (e.g. part of this *State Reuse Initiative* is funded is by the users...via a market based pricing structure.</li> </ul>	<p>opportunity for a legacy.</p> <ul style="list-style-type: none"> <li>• Before the OPC spends any money for salmon restoration (and \$10M isn't much) they should strongly consider putting the wheels in motion for long-term change in the use of reclaimed water via a public education campaign.</li> <li>• Use influence of Boxer, Feinstein and Pelosi to secure a Federal funding</li> </ul>
<p><b>Barriers</b></p>		
<ul style="list-style-type: none"> <li>• Remove barriers (dams, culverts, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Take down lower 4 Klamath dams (several respondents included this a strategy)</li> </ul>	<ul style="list-style-type: none"> <li>• Push back on agencies responsible for water and habitat behind dams</li> </ul>

<ul style="list-style-type: none"> <li>Restore and enhance salmon – protection is not adequate or acceptable</li> </ul>	<ul style="list-style-type: none"> <li>Restore habitat and access to it by removing dams</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Prioritize the causes of decline based on the scientific evidence such as dams, diversions, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Solicit input from a diverse group of people such as fisherman conservation groups, marine biologists through public forums, suppliers, manufactures</li> </ul>	<ul style="list-style-type: none"> <li>Sell the concept of saving this fishery before it's too late</li> </ul>
<ul style="list-style-type: none"> <li>Remove the current barriers and impediments in the rivers that result in significant die offs in upstream and downstream migration. The obsolete Red Bluff Dam and the delta cross channel barrier are two examples</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Habitat</b>		
<ul style="list-style-type: none"> <li>Restore freshwater habitat</li> </ul>	<ul style="list-style-type: none"> <li>Implement existing laws and regulations</li> <li>Encourage private landowner participation in monitoring and restoration (tax credits)</li> <li>Focused research to determine restoration objective: restore habitat that is limiting -&gt; fiscally and biologically responsible</li> <li>Implement gravel augmentation programs</li> </ul>	<ul style="list-style-type: none"> <li>Quickly transmit to the policy makers that the problem is water and habitat quantity and quality</li> </ul>
<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Acknowledge up front that existing programs have not and are not working</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Hatcheries</b>		
<ul style="list-style-type: none"> <li>Deal with wild and hatchery salmon in a holistic manner</li> </ul>	<ul style="list-style-type: none"> <li>Declare salmon to be an Iconic resource for California that must be preserved and restored – they must be considered in every aspect of water management and usage</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Restore and enhance salmon – protection is not adequate or acceptable</li> </ul>	<ul style="list-style-type: none"> <li>Re-engineer hatchery programs to use hatcheries for construction and restoration of genetic diversity in the population</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Fishing</b>		
<ul style="list-style-type: none"> <li>Embrace and expand a “doubling goal” – develop specific production goals for total fishery harvest, considering both hatchery and wild stocks</li> </ul>	<ul style="list-style-type: none"> <li>Remove key barriers, including some dams (e.g. Klamath Dams)</li> </ul>	<ul style="list-style-type: none"> <li>Push for representative of key state boards that will push for resource protection</li> <li>Make sure salmon recovery is a key objective of Delta planning process</li> </ul>
<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Keep salmon fleet working –</li> </ul>	<ul style="list-style-type: none"> <li>Encourage DFG to develop</li> </ul>

	without salmon fishermen the salmon will fail	policies favoring small family fishermen
•	• Remove unnecessary dams	•
• Protect the commercial salmon fleet	• Crab pot limits and access to hook & line rock cod • Litigation • Education	• Make Fish & Game do their job • Get Julie Oltman fired
<b>Other</b>		
• Develop key objective by geographic region (e.g. central valley, Klamath, North Coast, and then central and southwest steelhead	• Use better science (quantitative modeling) to help get regional priorities for salmon restoration activities	• Work with governor and legislature to properly staff and fund agencies and ensure direction to implement existing laws and rejuvenate agency focus on protecting/conserving public trust resources (e.g. DFG, DWR)
•	•	• Publicize the plight and help publicize the steps that can change the political will of the Legislature and the Governor
•	•	• Do things that others don't: advocate for fish and other aquatic species in freshwater and ocean • Don't let salmon problems be delegated to further study by OPC
• Improve collaboration between freshwater managers, ocean managers, and scientist. There are indications at sea that can inform management inland (such as dam releases)	• Support development of modeling and forecasting tools for understand what's happening in the marine food web; i.e. develop indicators of food web productivity that can inform harvest guideline and flow releases	•
• Gain political will	• Educate	•
• Educate the public on salmon biology, runs, life stages – there are salmon in your river all year	• Provide direct “salmon funding” to organizations that do on the ground restoration and advocacy	•

## Eureka Flipchart Notes:

### Questions posed:

1. If you were a member of the OPC, what would be the objectives for California's policy on wild salmon protection?
2. What strategies would you implement to achieve those objectives?
3. How can OPC use its leadership to support what is working and encourage change where it is needed?

Objectives	Strategies	What OPC can do
<ul style="list-style-type: none"> <li>• Healthy wild salmon throughout their range</li> <li>• Harvestable surplus: robust fisheries and sustainable populations</li> <li>• This applies to all species in streams, not just harvestable</li> </ul>	<ul style="list-style-type: none"> <li>• Enforce existing laws (F&amp;G Code 5937, water code) <ul style="list-style-type: none"> <li>• Issue of “political will” and funding</li> </ul> </li> <li>• Ensure water rights for fish</li> <li>• Tighten up permitting process <ul style="list-style-type: none"> <li>• Enforce water rights</li> <li>• Limit ground water use</li> </ul> </li> <li>• Fish passage</li> <li>• Longer term funding (independent of general funds) for monitoring</li> <li>• Establish a “water czar” cabinet position</li> </ul>	<ul style="list-style-type: none"> <li>• Recommend legislation</li> <li>• Provide funding</li> <li>• Encourage enforcement</li> <li>• Encourage acts of “political will”</li> </ul>
<ul style="list-style-type: none"> <li>• Get fish to ocean alive</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure adequate flows through Delta and Klamath. Little “low hanging fruit” exists here. Need to address the “trunk of the tree”</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Support for initial objectives above</li> </ul>	<ul style="list-style-type: none"> <li>• Consider dam removal. Analyze the costs/benefits of removing different dams in the state</li> </ul>	<ul style="list-style-type: none"> <li>• OPC may need to get involved in energy policy, as the issues are related</li> <li>• Weigh in on dam removal</li> </ul>
<ul style="list-style-type: none"> <li>• Support for initial objectives above</li> </ul>	<ul style="list-style-type: none"> <li>• Find and remove the diversions that kill the most fish</li> <li>• Re-install salmon once habitat is restored to key waterways</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• OPC process (e.g., funding) needs to be transparent</li> <li>• Make the data used to inform policy decisions available to all for input/review (e.g., Ecotrust analysis)</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Issue of “political will”</li> <li>• Many examples exist of successful acts of political will (eg., Butte Creek)</li> </ul>	<ul style="list-style-type: none"> <li>• OPC needs to take strong policy positions and influence the Governor</li> </ul>
<ul style="list-style-type: none"> <li>• Support for initial objectives above</li> </ul>	<ul style="list-style-type: none"> <li>• Examine turn of century adjudications that did not address salmon</li> <li>• Address water quality in Klamath. Water Boards need to address non-point source problems, implement TMDLs</li> <li>• Enforce existing laws (e.g., water rights)</li> <li>• “Political will” is more important than more research at this point</li> </ul>	<ul style="list-style-type: none"> <li>• OPC could ask that turn of century adjudications be re-examined for salmon</li> </ul>
<ul style="list-style-type: none"> <li>• Support for initial objectives above (“What is good for salmon is good for people”)</li> </ul>	<ul style="list-style-type: none"> <li>• Purchase water rights; create “water trusts”</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Consider use of “solicitor’s opinion” as a tool, regarding tribal water rights but may apply to non-tribal too</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

•	<ul style="list-style-type: none"> <li>• Address climate change. Get fish to areas of cold water (spring fed).</li> <li>• Create refuges and restore former cold water areas</li> </ul>	•
•	<ul style="list-style-type: none"> <li>• Conduct comprehensive legal overview of water law</li> <li>• Implement water conservation efforts</li> <li>• Pursue Integrated Watershed Management; build on local capacities and non-regulatory measures (e.g., update infrastructure)</li> <li>• Have Western Governors weigh in</li> <li>• Obtain funding (redistribute Prop 50 resources to North Coast)</li> </ul>	<ul style="list-style-type: none"> <li>• OPC leads comprehensive legal overview of water law; perhaps create a blue ribbon panel</li> </ul>
•	<ul style="list-style-type: none"> <li>• Focus on long-term solutions (not short term funding)</li> <li>• Make information/research results available to all (such as through the use of the Klamath Resource Information System)</li> </ul>	•
•	<ul style="list-style-type: none"> <li>• Reassess the effectiveness of salmon restoration efforts</li> <li>• Use a blue ribbon task force to produce solutions</li> </ul>	•
• Not articulated	<ul style="list-style-type: none"> <li>• Rebuild wild salmon stocks from the most viable populations</li> <li>• Restore viable populations</li> <li>• Build on existing DFG policies; focus resources on the most successful</li> <li>• Prioritize best opportunities for success</li> <li>• Establish refugia</li> </ul>	<ul style="list-style-type: none"> <li>• OPC to determine what is reasonable use of water in CA</li> </ul>
• Support for initial objectives above	<ul style="list-style-type: none"> <li>• Address water rights</li> <li>• Ensure enough funding available for fish</li> </ul>	<ul style="list-style-type: none"> <li>• OPC to support locally driven solutions</li> <li>• Public has to buy in to ensure success</li> </ul>
•	•	<ul style="list-style-type: none"> <li>• OPC to encourage Governor to put political appointees (e.g., DFG) on the ballot</li> </ul>
•	<ul style="list-style-type: none"> <li>• Address relation between climate change and ocean conditions</li> <li>• Revise water laws for the 21<sup>st</sup> century. CA can be more restrictive than federal laws</li> <li>• Address the population issue</li> </ul>	<ul style="list-style-type: none"> <li>• OPC lead charge on this initiative</li> <li>• OPC needs to address these initiatives at all levels (local, state)</li> </ul>
• Not articulated	<ul style="list-style-type: none"> <li>• Improve our knowledge of distribution and effects of hatchery fish</li> <li>• Do so by marking all hatchery fish (done in Oregon)</li> <li>• This allows for harvest of hatchery fish and provide information on the interaction between hatchery and wild salmon</li> </ul>	•

## Eureka Comment Form Summary

Purpose:

- The purpose of this comment form is to provide workshop participants with the opportunity to recommend appropriate state objectives and strategies to improve the protection of California’s wild salmon populations
- Input from these comment forms will be compiled and summarized in the workshop summary report, and will be used to inform the briefing of the OPC on the topic of wild salmon protection

Questions:

1. If you were the OPC, what would be the **objectives** for California’s policy on wild salmon protection?
2. What **strategies** would you implement to achieve those objectives?
3. How can OPC use its leadership to **support** what is working and **encourage change** where it is needed?

Objective	Strategy	OPC Actions
<b>Water Quality</b>		
<ul style="list-style-type: none"> <li>• Self sustaining populations of all (one respondent inserted “native” here) species with a harvestable surplus for commercial, sport, and tribal fisheries ( multiple respondent stated this objective)</li> </ul>	<ul style="list-style-type: none"> <li>• Support funding for the Water Board to complete and implement TMDLs</li> <li>• Staff Dept. of Fish and Game to enforce water laws</li> <li>• Charge all users of water a fee that would be dedicated to restoration efforts, water rights purchases – charge the full cost of water use, including environmental degradation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Uphold the state policy established in 1988 by SB 2261 to double the (then) current populations of salmon primarily through improvement in productivity of wild populations. Set the objective to have populations capable of supporting viable sport, commercial, and tribal fisheries by improving survival in wild populations.</li> </ul>	<ul style="list-style-type: none"> <li>• Uphold and strengthen existing statutes that protect habitat (especially water flow and quality) needed by wild salmon.</li> <li>• Utilize existing water code to clarify “reasonable use” and “beneficial use” of water. What was deemed a beneficial use in 1910 when water rights were adjudicated may no longer be (Is it still a “beneficial use” to flood irrigate cow pastures in 100 degree weather and allow surplus water to return to salmon bearing waters?)</li> </ul>	<ul style="list-style-type: none"> <li>• Don’t waste effort “reinventing the wheel” in regards to what wild salmon actually need. Insist the executive and legislative branches abandon the fallacy that we can continue to increase water diversion rates from salmon bearing rivers without causing further population declines. The population trend is telling us we are already exceeding thresholds that salmon can survive over the long term.</li> </ul>
<ul style="list-style-type: none"> <li>• Encourage and empower</li> </ul>	<ul style="list-style-type: none"> <li>• More funding for:</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to seek public input</li> </ul>

<p>community members living in their watersheds to actively volunteer to help restore their watersheds</p> <ul style="list-style-type: none"> <li>• Hold corporations, citizens, businesses accountable (financially) for their destruction of watersheds, water, etc.</li> </ul>	<ol style="list-style-type: none"> <li>Education of the public (children and adults)</li> <li>Advocacy to promote watershed protection</li> <li>Funds to run volunteer programs that recruit community volunteers to get involve in their watersheds</li> </ol> <ul style="list-style-type: none"> <li>• Hire experts in salmon/fisheries modeling, biometrics, population dynamics to predict populations</li> </ul>	<p>and expand to include everyday citizens living in watersheds and continue to include the expertise of fishermen and ranchers</p>
<ul style="list-style-type: none"> <li>• Improve water quality</li> </ul>	<ul style="list-style-type: none"> <li>• Finish and implement TMDLs</li> <li>• Increase staffing for ACRWB</li> <li>• Don't allow excessive pollution of areas where salmon live</li> <li>• More law enforcement</li> <li>• Hold Fish &amp; Game accountable to do their jobs and implement water quality and fisheries recovery plans</li> <li>• Evaluate non point pollution – including from Oregon</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage enforcement</li> </ul>
<ul style="list-style-type: none"> <li>• Give the State Water Quality Board the authority and mandate to manage water quality for all fish in state waters</li> </ul>	<ul style="list-style-type: none"> <li>• Put all ground water in the state under the protection of the public trust</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage change by directing the legislature to direct all resource divisions of Fish &amp; Game, Water Quality Board, and Forestry to be elected to their jobs (a couple people mentioned this)</li> </ul>
<b>Water Quantity/Supply</b>		
<ul style="list-style-type: none"> <li>• Restore salmon habitat including natural hydrographs (at least mimic the shape of natural hydrographs)</li> </ul>	<ul style="list-style-type: none"> <li>• Enforce existing laws regarding in-stream flows (F&amp;G code 5937)</li> <li>• Regulate groundwater withdraws</li> <li>• Focus on long-term solutions i.e. don't buy in stream flow for short periods</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Self sustaining populations of all species throughout their range with a harvestable surplus for commercial, sport, and tribal fisheries</li> </ul>	<ul style="list-style-type: none"> <li>• Staff Dept. of Fish and Game to enforce water laws</li> <li>• Have state Water Board declare all streams fully appropriated until fish follows are met</li> <li>• Increase in-stream flows by purchasing water rights</li> <li>• Focus resources on those systems having reliable sources of cold water or where these cold water resources can be secured if global warming is making southern salmon streams less viable)</li> <li>• More law enforcement</li> <li>• Work with other water users (instead of heavy handed tactics) to get them to “buy in” to improving</li> </ul>	<ul style="list-style-type: none"> <li>• Take on agricultural water rights in key watersheds</li> </ul>

	water flows	
<ul style="list-style-type: none"> <li>• Increase water quantity (at right time and temperature)</li> </ul>	<ul style="list-style-type: none"> <li>• Come to grips with the over allocation of water</li> <li>• Regulate ground water</li> <li>• Purchase water rights</li> <li>• Provide funds to reasonably enforce laws</li> <li>• Revise California water policies to reflect changing management goals, changing populations, and a changing climate. We can expect water laws that were developed 2 centuries ago to still be valid. Lets evolve with the times.</li> <li>• Develop and implement water conservation measures at an unprecedented scale, and try to curb the corruption by groups such as the Westlunds Water District.</li> </ul>	<ul style="list-style-type: none"> <li>• Revise CA and US water laws to meet the needs of the 21<sup>st</sup> century – deal with this at all levels</li> <li>• Fund and support agency staff</li> <li>• Encourage enforcement</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Look at agricultural use of water – they use 80% of California’s water and 11% of its energy</li> </ul>	<ul style="list-style-type: none"> <li>• Water conservation from agriculture</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation of existing water law (e.g. require 1992 CUPIA 800,000 acre feet of water for fish and wildlife)</li> </ul>	<ul style="list-style-type: none"> <li>• Buy “Big Springs” on the Shasta River (20 or 50 cfs of 54 degree water at 6 million dollars)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Use the Public Trust Doctrine as an organizing principle for protection of wild salmon</li> </ul>
<ul style="list-style-type: none"> <li>• Strengthen institutional capacity regarding water supply cumulative impacts for development such that CEQA significant impacts could NOT be over-ridden. As development proceeds, the base flow needed for steelhead recovery must be preserved. It is very difficult to have a well heard voice when statements of over-riding concern trump habitat restoration efforts that are watershed wide and not specific to a particular development project.</li> </ul>	<ul style="list-style-type: none"> <li>• State-wide planning processes (Local Coastal Act) to provide guidance on maintaining base flows for watersheds with steelhead runs</li> <li>• Resources Agency applying political pressure to educate the community about development and the need to balance water for people and water for wildlife</li> </ul>	<ul style="list-style-type: none"> <li>• Use OPC council members who oversee regulatory agencies and influence resource management policy to meet with other high-level policy makers and elected officials on state level resource committees. Invite and support those of us in the 'trenches' to tell our stories to these folks.</li> </ul>
<ul style="list-style-type: none"> <li>• Revise water laws to provide allow for water to remain instream for salmon – particularly</li> </ul>	<ul style="list-style-type: none"> <li>• A ban on flood irrigation for everything but possibly rice, which needs to be flooded</li> <li>• A ban on open ditch irrigation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<p>important in agricultural areas (e.g. Klamath Basin) where important spring creeks are diverted for flood irrigation</p>	<ul style="list-style-type: none"> <li>• Strict regulations on tailwater return, grazing, and water born chemicals used to kill growth in ditches</li> <li>• Creating a cost benefit analysis on unproductive and often unregulated crops such as cows and hay</li> <li>• Reopening and reducing poorly made adjudications in key salmon areas with an eye toward guaranteeing cold, clean instream flows for salmon, and finally</li> <li>• Enforcing and updating California's laws, which pertain to salmon protection and clean water</li> <li>• Do not use additional effort for expensive and ineffective mitigation measures for agriculture (e.g sprinkler systems, groundwater/surface water wells)</li> </ul>	
<b>Hatcheries</b>		
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Mark all hatchery fish and implement a no take policy on wild fish</li> <li>• Improve management practice – manage hatchery fish numbers and timing</li> </ul>	<ul style="list-style-type: none"> <li>• Need to mark 100% of all hatchery origin fish (several respondents included this as a recommended action)</li> </ul>
<ul style="list-style-type: none"> <li>• Maintain genetic integrity - seek to eliminate the adverse genetic effects of hatcheries and out planting</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize production hatcheries, and shift to conservation hatcheries. Hatcheries are killing wild salmon populations. Anglers may love them, but they are not solving the problem, and are, in fact, contributing to it.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Fishing</b>		
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Create stock identification</li> <li>• Uses selective fisheries</li> <li>• Improved enforcement and monitoring</li> <li>• Manage week stocks</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Barriers</b>		
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Remove 4 dams on the Klamath (2<sup>nd</sup> largest salmon stream in California)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Provide fish access to areas where they want to</li> </ul>	<ul style="list-style-type: none"> <li>• Develop long-term dam removal or modification</li> </ul>	<ul style="list-style-type: none"> <li>• Fund barrier removal and incentive programs for</li> </ul>

go - remove barriers	<ul style="list-style-type: none"> <li>• Fund removal of barriers</li> </ul>	stewardship and water purchases
•	•	<ul style="list-style-type: none"> <li>• Take on hard issues and prioritize barriers with cold water</li> </ul>
<ul style="list-style-type: none"> <li>• Restore wild salmon runs to self-sustaining populations (i.e. NOT hatchery based populations)</li> </ul>	<ul style="list-style-type: none"> <li>• Put full support into facilitation Klamath dam removal in as short a time window as possible. The Klamath is the third largest salmon producer along the west coast (outside Alaska), and as soon as the lower 4 dams come out, water quality will dramatically improve and fish passage will be restored to ½ of the 12,000 square mile basin. The biological significance of this can't be overstated</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on restoration success stories in order to show what is working. Do it in the media. Spread the word. Create an education and outreach program that helps get the word out. Focus it all around the Klamath, if necessary. The fact that the Klamath is a fixable problem will be an invaluable model for other more complex areas such as Sacramento/ San Joachin</li> </ul>
•	<ul style="list-style-type: none"> <li>• Remove all documented fish barriers (culverts, debris basins, small dams), especially along the CalTrans right-of-way. Most of the county road networks in coastal California have already been inventoried, and many sites treated, but CalTrans has a much larger problem, due to the scale of the Highway network. CalTrans will need massive funding in order to effectively treat all of the fish barriers along their right of way.</li> <li>• Remove obsolete dams, like the lower 4 Klamath Dams. Begin the new era of Damolition. Typical fish barrier removals open up 1-10 miles of blocked habitat. Taking out the Klamath Dams will open up more that 350 miles of viable salmon and steelhead habitat.</li> </ul>	•
<b>Habitat</b>		
<ul style="list-style-type: none"> <li>• Restore salmon habitat including interconnection between streams and floodplains and interconnection between wetlands and riparian forests</li> </ul>	<ul style="list-style-type: none"> <li>• Regulate development and agriculture in floodplains to leave room for riparian forests and wetlands</li> <li>• Develop a statewide database of information on both science/research and implementation of projects (e.g. <a href="http://www.krisweb.com">www.krisweb.com</a>)</li> </ul>	•
<ul style="list-style-type: none"> <li>• Improve salmon habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Take an ocean to headwaters view of habitat</li> <li>• Restore/reclaim estuaries and flood plains</li> </ul>	•

	<ul style="list-style-type: none"> <li>• Mandatory passage above all structures</li> <li>• No timber harvest within 100 ft of active salmon rivers</li> <li>• 300 – 500 ft buffer on all salmon streams</li> <li>• Use pilot projects in high profile watersheds to get public buy-in, but focus efforts on areas with existing fisheries that have been sustaining the state’s fishing industry and Tribes, where protection and recovery can be immediately effective, such as the Sacramento River and tributaries and the Klamath River and tributaries.</li> </ul>	
<ul style="list-style-type: none"> <li>• Acknowledge that as long as there are protection for harming population, which is driven by our economic system all species habitat will diminish</li> </ul>	<ul style="list-style-type: none"> <li>• Bring the “p” (population) word to the table. The ratio between existing human population and sufficient natural resources to have a good quality of life is way out of balance, especially in California - everything else is a placeholder until we address this.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Take the “big picture”/holistic view of habitat restoration – headwaters (including above dams) , rivers, estuaries, coastal zone</li> </ul>	<ul style="list-style-type: none"> <li>• Better management of habitat and habitat connectivity – quality and quantity are necessary</li> <li>• Take a holistic view</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate holistic funding mechanisms/approaches</li> </ul>
<ul style="list-style-type: none"> <li>• Create institutional linkages among land-side planning/restoration entities and ocean-side planning/restoration entities. Water quality standards do not mesh well in respect to freshwater and marine/near shore habitats. When we strive for Clean Beaches, the upstream land use must be linked to beach advisories on the coast.</li> </ul>	<ul style="list-style-type: none"> <li>• Coast and Ocean Roundtable that is being facilitated is a great pilot to sort workable objectives to articulate how relationships could work between land and marine planners/restorationists. Coastal counties have a special role to play and could use their general plans to augment and articulate the need to link these planning spheres. The regional and state water boards could also be tapped to strengthen how they articulate fresh/marine water protection and water rights.</li> </ul>	<ul style="list-style-type: none"> <li>• (repeated as single recommendation for OPC - to be applied with multiple objective/strategies) Use OPC council members who oversee regulatory agencies and influence resource management policy to meet with other high-level policy makers and elected officials on state level resource committees. Invite and support those of us in the 'trenches' to tell our stories to these folks.</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Our organization is involved in stock enhancement of Chinook salmon as well as habitat restoration for Steelhead. At this point, CDFG does not support stock enhancement for Steelhead. There may be a role for stock</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

	enhancement as part of the Steelhead Recovery process. We are exploring partnerships that may allow for a local 'clean' genetic stock of steelhead to be used for this purpose. It would be useful for CDFG to explore on-the-ground efforts in this regard as the recovery planning process unfolds.	
<b>Science</b>		
<ul style="list-style-type: none"> <li>Improve understanding of food chain (harvest of krill, anchovies, herring, sea weed, sardines disrupts the low level food chain), ecology of multispecies relationship, bioenergetics and salmon needs, harvest/stock impacts, monitoring for catch and fish population dynamics, foreign fisheries, ocean dynamics (currents, upwelling, temperature), global warming</li> </ul>	<ul style="list-style-type: none"> <li>New high quality scientists</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li>Monitor existing runs to better understand what we currently have</li> </ul>	<ul style="list-style-type: none"> <li>Utilize best available monitoring science (e.g. sonar/video) to accurately and consistently count fish in rivers</li> </ul>	<ul style="list-style-type: none"> <li>Provide funding to target objectives though assisting programs (e.g. Fisheries Restoration Grants Program) that conserve (land trusts, etc.), enhance, and monitor population viability and status</li> </ul>
<ul style="list-style-type: none"> <li>Acknowledge the connection between global climate change and its effect on salmon populations around the globe - take the lead, much as CA did on the global climate issue</li> </ul>	<ul style="list-style-type: none"> <li>Clearly involves and international forum, best at the UN level, which means California and the U.S. need to support the Un on this issue</li> </ul>	<ul style="list-style-type: none"> <li>Support discussion of the population issue at all levels – from the local lever were need to talk about water issues</li> </ul>
<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Don't get lost in "trendy" solutions – salmon have been around a longtime – there has been climate changes and ocean condition variations during their time</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Standardize data collection among the agencies</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Other</b>		
<ul style="list-style-type: none"> <li>Maintain and restore populations (in order of priority) <ul style="list-style-type: none"> <li>a. Maintain existing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>For each species and key watershed identify the one or two most important limiting factors (very specific geographically and</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

<p>healthy populations. Identify potential threats, including those caused by global warming, and be proactive in eliminating or mitigating the threats</p> <p>b. Restore watersheds that are key to maintaining the long-term viability of the metapopulations or ESU</p> <p>c. Restore populations that will sustain commercial, tribal, and recreational fisheries</p>	<p>mechanistically).</p> <ul style="list-style-type: none"> <li>• Identify actions or suite of actions to address limiting factors</li> <li>• Have stakeholder workshops to help determine how restoration actions can be best implemented</li> <li>• Fully implement restoration actions. If resources are inadequate to restore all watersheds, fully implement restoration actions in a subset of key watersheds in order to help ensure that there is demonstrable benefit to some populations</li> <li>• Intensive monitoring to document what works and does not</li> </ul>	
<ul style="list-style-type: none"> <li>• On the socio-political front- make clear to all Californians the important role that salmon play to certain parts of the California population, namely coastal and tribal communities. Salmon play an important economic role in many communities, but salmon play a crucial role in the physical health and well-being of tribal and some coastal communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop creative ways to highlight the significance of salmon to all Californians, by creating a diverse media campaign ranging from commercials to full documentaries, music videos and art installations – all about salmon and salmon culture; salmon restoration success stories, and salmon ecology. The diversity of media should focus on the long established connection between humans and salmon – starting with Native communities along the Klamath River (Yurok, Hupa, Karuk), and extending to fishing communities along the north coast, and elsewhere. Most people don't know about the salmon cultures that continue to rely on salmon as their primary food and source of income.</li> <li>• Make a similar effort with southern steelhead, in order to include southern California, but don't be afraid to recognize that salmon have always played a more profound role in the northern half of the state.</li> </ul>	<ul style="list-style-type: none"> <li>• Access the salmon-research brain trust (e.g. Dr. Peter Moyle; Dr. Bill Trush; Dr. Terry Roelofs, Dr. Dave Montgomery in order to get the most expert of expert opinion to review the state of our salmon restoration efforts. Use a "consilience" model, based on the book Consilience, by Dr. E. O. Wilson.</li> <li>• Summarize and synthesize this information in an educational video production, so people can listen to and watch the experts, rather than having to read it (which very few people will likely do).</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Mine the expertise of the hundreds of people who have been working in the field and at a computer for 20-30 years on salmon preservation &amp;</li> </ul>

		restoration – identify them and pick their brains
<ul style="list-style-type: none"> <li>• Long-term restoration of salmon where <ul style="list-style-type: none"> <li>a. It is likely that restoration could be accomplished</li> <li>b. Benefits of water use for salmon clearly exceed other uses for water (e.g. Klamath System), but <u>not everywhere</u> (which is the stated objective of our meeting)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Document and rank all streams in California based on <ul style="list-style-type: none"> <li>a. Historic abundance (see NMFS Tech Recovery Team Documents)</li> <li>b. Potential for rehabilitation</li> <li>c. Costs and competing uses</li> </ul> </li> <li>• Put efforts into streams “rising to the top” of the list and divert money used to restore Sacramento (and Col) to rivers that have potential (e.g. Klamath, Rogue, Umpqua, Eel)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Step up efforts for CDFG to articulate with NOAA Fisheries on Recovery Planning for Steelhead. On the local level, we are in the dark as to what the two agencies are doing to ensure a seamless process for restorationists in the 'trenches' in terms of prioritizing watersheds/projects when the draft Federal Steelhead Recovery Plan hits the streets in the next few months.</li> </ul>	<ul style="list-style-type: none"> <li>• Support multi-county efforts such as Fish-net for C and Tri-Counties Fish Team and state-wide efforts such as the Salmonid Restoration Federation (and many others such as Central Coast Salmon Enhancement) through stakeholder groups to engender support for CDFG/NOAA Steelhead Recovery Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• (repeated as single recommendation for OPC - to be applied with multiple objective/strategies) Use OPC council members who oversee regulatory agencies and influence resource management policy to meet with other high-level policy makers and elected officials on state level resource committees. Invite and support those of us in the 'trenches' to tell our stories to these folks.</li> </ul>
<ul style="list-style-type: none"> <li>• Get salmon to the ocean alive (this is a much bigger problem than getting them from the ocean back to the rivers)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Mass marking is not the answer – it plays holy hell with ocean fisheries management, which is based on CWT recovery at dockside and in the river (check with fishermen from WA and AK: it's a bad deal); mass marking works better the higher the percentage of hatchery fish encountered, or, the weaker the natural runs are. So it's likely to be a way to kiss off natural runs, leading to production hatcheries in the estuaries and dead rivers</li> <li>• The low hanging fruit has been picked – the Klamath River Task Force spent twenty years but not much money working on problems in the Klamath's</li> </ul>

		<p>tributaries. Many of those problems, not all by any means, have been successfully addressed (provided they weren't flow related). In wet and very wet years, the Klamath can still be very productive. This year's age 4 run should be an example but in drier years the parasite c. Shasta, among a host of other problems, continues to kill high percentages of little fish trying to survive the trip to the ocean. The Sacramento is similar all 20 problems identified since SB 1086 have been addressed with solutions. Bigger ticket items (e.g. Glen-Colusa screen, the Shasta cold-water device, and ozonators at Coleman Hatchery are example and through 2005 we enjoyed very high abundance of Sacramento fall Chinook</p>
<ul style="list-style-type: none"> <li>• Self sustaining populations of all native species with a harvestable surplus for commercial, sport, and tribal fisheries</li> </ul>	<ul style="list-style-type: none"> <li>• Support locally driven solutions to recover salmon populations (e.g. the Klamath settlement restoration discussions) buy in from the public is very important ex) The Eel River could produce huge numbers of fish</li> <li>• Determine best cost/benefit plans (prioritize)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Create incentives for recovery for fisherman and farmers (ranchers, dairy, produce, grain)</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Fully fund and support state and county resource and enforcement agencies</li> <li>• Fully fund and support watershed groups/RRDs</li> <li>• Partner with federal agencies</li> <li>• Develop restoration incentives</li> <li>• Prioritize funding based on limiting factors and make it multi year</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Create a "Salmon officer" in CA government</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Read and implement recommendations from Bob Lackey's "Salmon 2100" book!</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

•	•	• Look at all important fisheries and not just at the endangered ones, as those are not the fisheries that are supporting the fishing industry and Tribes. Acts to save important commercial fisheries will in turn benefit endangered species, however, single species management is effective in broad issues such as the ones the OPC is currently addressing
---	---	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------