Comments

Dear Sirs

Thank you for the opportunity to comment upon the current draft version of the Oregon Coastal Coho Conservation plan.

I confess that there are several parts of this Draft Coho Conservation plan which I do not at present approve, then again, I am not sure I shall ever approve of them. For having followed the creation of many of ODFW's guiding documents regarding conservation plan development, I have experienced many instances of staff being obliged by political considerations as opposed to biological. Yet, it is my heart felt belief that when presented better information, or fuller consideration, ODFW Staff will change opinions, even on important subjects, regardless of the political basis. It is unfortunate that input from public such as my self is so limited and truncated, as to only allow negatives to be discussed. I wish I had the opportunity to bring forth the praise that is due for so much of the good work that comprised the creation of this Conservation plan, but highlighting what I and others deem as negative appears to be the only input staff will grudgingly make time for.

Promises...promises

During the creation of the Native Fish Conservation Policy staff made many gestures as to how conservation plans would contain all of the information each side of the Hatchery-natural production debate felt should be included. Staff referred to an IMST review that found that little to no documentation existed as to why hatchery and other programs were being pursued and how they related to native conservation. Staff wanted to make conservation plans the descriptive document that explained all of Oregon's actions relating to conservation. Staff was adamant that although these promises should not be made part of an Administrative Rule, it was their intent that conservation plans would be the "one stop shopping" document that contained all of the information as to where the state of Oregon was taking action and why they were doing it. As noted in the Current facilitators report:
http://www.oregon-plan.org/OPSW/cohoproject/PDFs/Appendix.1.DraftFacilReport.pdf , staff made commitments that were not made part of the final rule. Staff further indicated that "trust" would be fostered by allowing them to fulfill the promises that were not part of the final language.
It is unfortunate that many of the details that Fisheries Leadership had so adamantly agreed needed to be included in this or any conservation plan have thus far not been part of this conservation plan. Although little exists in writing of these un-codified promises, there remains one document from the Hatchery Management Policy deliberations that contain, albeit few, some of the specific promises staff made as to data inclusion into Conservation plans. Found at:

http://home.comcast.net/~lway3/Attachment_4.Summary_of_Public_Comments.Hatchery_Mgt._Policy.doc staff made specific statements as to what data conservation plans would contain, example:
*"Hatchery broodstock source will be identified in **conservation plans**"*

*"Specific program objectives, including the disposition of returning adult fish from hatchery programs will be in the hatchery program management plans developed for each hatchery program, and could allow this if specified in **conservation plans** and agreements."*

"*Commission approval will be via **conservation plans**, which describe the specific use of the hatchery tool in a given watershed."*
While these are only three examples of what details leadership had indicated they would include within conservation plans, the current Conservation Planning Coordinator should be obliged to include all information promised at the creation of the NFCP even though he was not part of the original process. To fail to do so will prevent the currency of trust from ever accumulating.

Short and Long Term

The NFCP describes specifically what each plan is to address as well as the order in which it should be addressed within each plan. OAR 635-007-0505 paragraph 5 is the section that is the codified language that requires staff to, among other things, first provide "*an assessment of the primary factors causing the gap between current and desired status, if there is a gap, and identify factors that can be managed.*"
Then staff is to provide "*a description of the short- and long-term management strategies most likely to address the primary limiting factors*"

While the Stakeholder Team and ODFW's Coho assessment agree that stream complexity is the most critical of all limiting factors across the ESU, staff has not included short term management strategies for stream complexity. It is imperative that staff be forced to address this short coming within this conservation plan. Staff should be encouraged to put in writing within this conservation plan their ideas, concerns, and strategies for in stream habitat creation. While using broad stroke language like "Restore processes" to describe what staff plans to do to address stream complexity, it does little to explain the processes, technique, or planning that will be needed to address what all have agreed is the issue that must be faced. Currently, the only existing conservation plan to use as a guide is for Miller Lake Lamprey. Yet even in this highly local species, staff was able to create a conservation plan that described the primary factor for limited production and addressed that specific factor in the Short Term.
I believe Coastal Coho deserve the same as Miller Lake Lamprey, even if staff is reluctant. It is important to note that staff did include an edited listing of the NFCP requirements for a conservation plan, but with the phrases short term and long term removed. Freudian perhaps?

Describe the Tool

So limited is ODFW's current documentation of in stream habitat work, personnel charged with in stream work can point to no document that describes the habitat tool. So important was describing these conservation tools that ODFW created specific language within the OAR's that comprise the NFCP for their best tool in the box, hatcheries. The Hatchery Management Policy is the basic description of the tool that is hatchery augmentation. The Conservation plan was to be the description as to how the tool was to be used and why. It is ironic that the one tool that staff felt needed to be described was, in the case of Coastal Coho, the one tool needed to be left in the box and unused. Staffs commitment to reduce hatchery plants to aid native Coho is to be praised. Yet Staff should make the effort to describe the Habitat tool as well. Staff should be encouraged to create a Habitat Management Policy that will describe the short and long term tools that make up both in stream and riparian habitat restoration. Staff should be encouraged to convene a public Workgroup to discuss and address all of the factors that impact in stream habitat restoration. Although adversarial, I can think of no better way of addressing the true issues that hinder or limit habitat restoration.

Estuaries

Staff needs to overcome the notion that addressing Coho's need for estuarine habitat is taboo, either biologically or politically. I am encouraged by staff's recognition of the need for research upon this subject. Additional data will surely augment the growing volumes that comprise our current understanding of estuaries and Coho.

New paradigm

The Coastal Coho Assessment contained new paradigms regarding Coho populations and there ability to maintain equilibrium even at low densities. The assessment also provided clues as to how wild populations behave with regards to density dependence and certain forms of hatchery augmentation. ODFW Staff must make it clear within this conservation plan that any hatchery augmentation that takes place before the production bottle neck within Coho's life cycle is biologically unsound. Specifically staff must make it clear why hatchbox and unfed fry programs are unsound so everyone is on the same page as to understanding the biology.

Salmon River

Staff should also take advantage of the new density dependant understanding of Coho populations and embrace new ways to elicit wild population increases in depressed stocks. Specifically, the Salmon River provides staff with the opportunity to utilize this new understanding. I propose a two part plan to aid in restoring the current depressed

wild Salmon River Coho population. In an effort to speed up the reduction of hatchery influence upon the current wild stock, staff should include in planning making use of temporary recapture devises at multiple points through out this basin in an effort to remove all of the early spawning hatchery stock. This action will not impact the wild population as there is a marked temporal difference between the hatchery and wild stocks. Second, staff should make use of the density dependant paradigm and collect fry and fingerlings from other local basins that normally provide strays to this dependant population. Under the density dependant model, any population reduction that occurs before the production bottleneck will not affect the final total of out-migrating smolts within donor river basins. The Salmon River population will gain increased genetic diversity without reducing other populations and without the risk of introducing negative traits if hatchery technology were used.

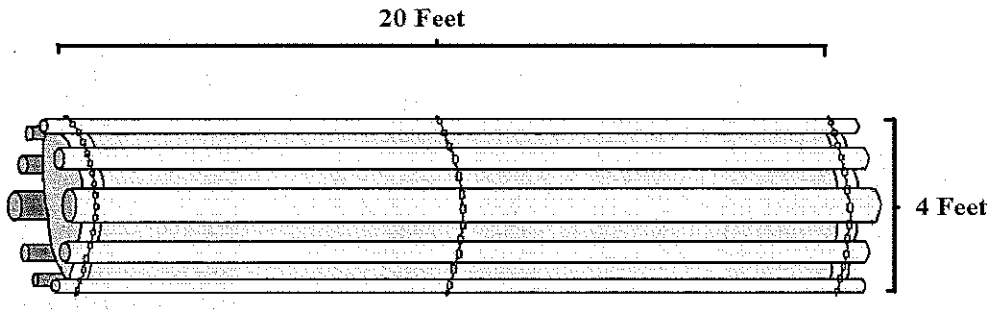
Beaver

The current draft of the Coastal Coho Conservation plan fails to address current complexities within state statue and administrative rule that allows Beaver to be managed by ODFW when harvested on public land but managed by Department of Agriculture when found within private property boundaries. Staff should fully explain the current ramifications of ORS 610.105 and, under good faith, ask lawmakers to make changes requiring reporting of beaver removal on private property. It is disingenuous to soon require big game hunters to report elk and deer harvest but not require private landowners to report beaver removal. While this draft is much better than the first two drafts concerning beaver, staff should consider more carefully what is needed to increase beaver populations in critical Coho habitat areas and put forward policies that represent ODFW's leadership role in conservation planning.

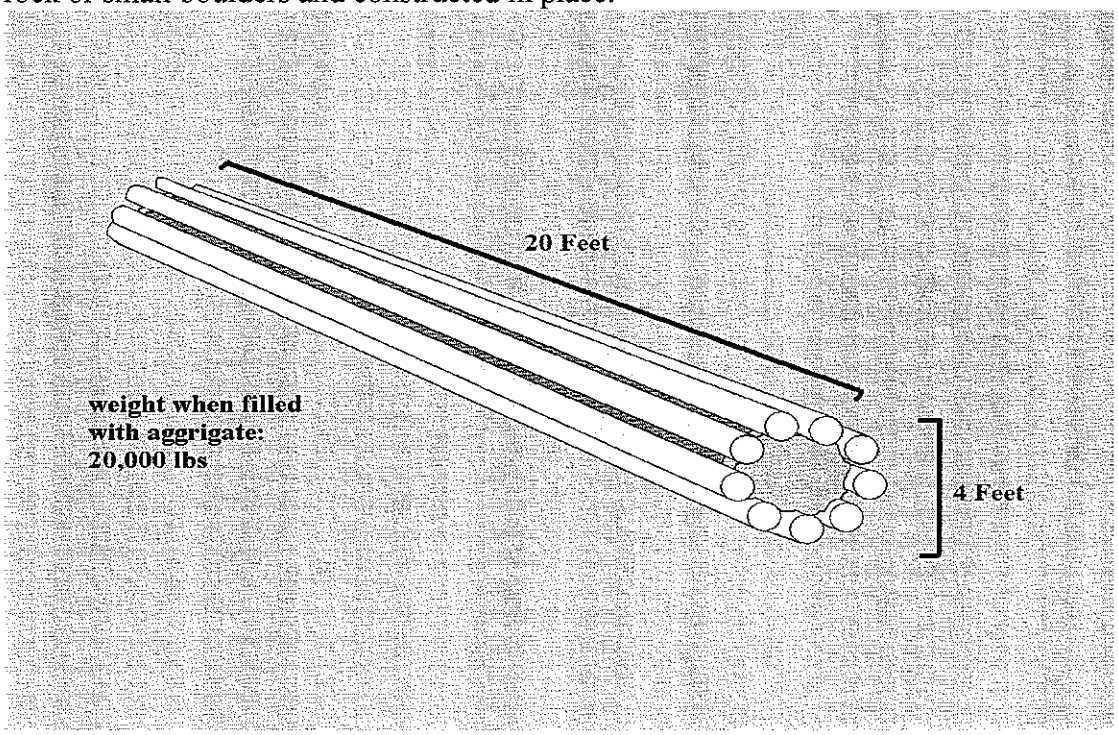
In-stream structures

One of the precepts to the conservation planning process is that staff document production bottlenecks in wild populations and put forth both short and long term solutions. According to both the Coho Assessment as well as the stakeholder review, in the case of most Coho populations it is over-winter habitat and stream complexity that is the bottleneck. The Long term solution in many cases is a combination of habitat restoration and placement of Large Woody Debris (LWD). But LWD is not immediate. It requires the capture of other material to create the type of complexity needed to increase survival within the lower reaches of Oregon's coastal streams that tend to be channelized and void of adequate structure within the margins. LWD is difficult to use in tidal estuaries as well as high flow areas in urban reaches of coastal streams. Further, in-stream LWD habitat work requires access to one bank by heavy logging equipment which is difficult in lower more developed portions of coastal rivers and estuaries.
I believe ODFW staff should utilize interim complex woody structures within the lower stream reaches of Oregon's coastal rivers.
I believe staff should consider using what I term as Gabion Logs

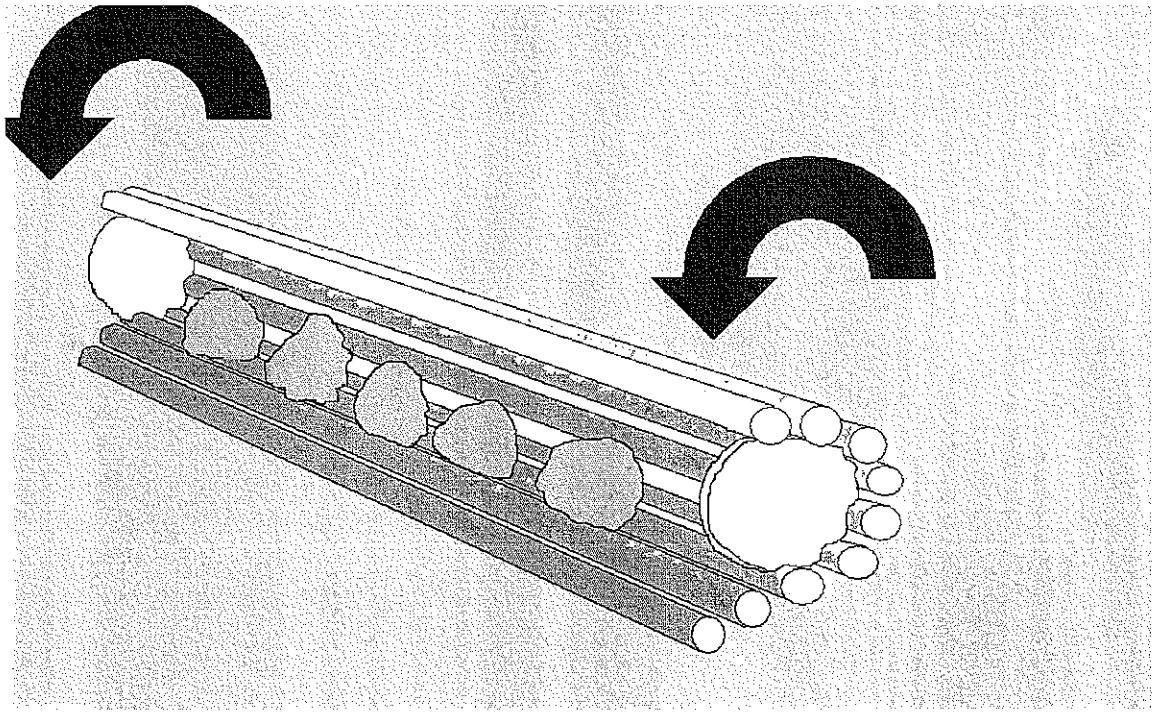
(Gabion is French for "cage")



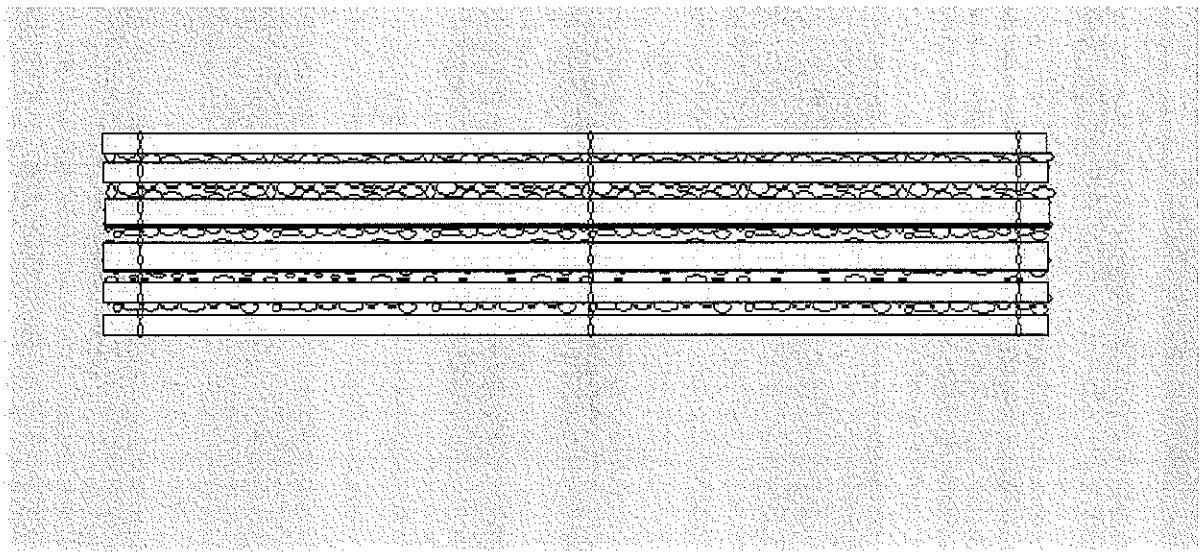
This is not a bundle of smaller logs but a tube of logs that is filled with cobble sized river rock or small boulders and constructed in place.



Gabion Logs provide several solutions that LWD does not.



Gabion logs would not be buoyant. In a tidal estuary environment floating LWD does not provide habitat advantages and are hard to maintain in place. Gabion Logs of this type would be tremendously heavy and would not require the cabling in lower velocity flow areas of the estuary or ponded reaches.



Gabion Logs can provide high quality habitat for juvenile salmonids because their internal structure is a labyrinth of crevices and voids that maintain water flow but still provide cover from predators. They can provide interstitial spaces for juveniles that are lacking within many channelized or silted streambeds. Although Gabion logs can be constructed in a myriad of different ways, most efficient would be to make use of pre fabricated poured concrete ends resembling 3 foot wide stepping stones and pre notched

uniform length 6 inch round timbers. Using these size materials will allow volunteers to both build and place Gabion Logs and not take away funds currently being utilized for traditional habitat projects. Gabion logs will provide immediate habitat and stream complexity upon placement into the stream or river. They would not have to capture coarse woody debris in order to provide complexity.

Gabion logs are short term or interim measures to be utilized immediately to aid low production populations now. Estuaries will be the next battleground in our habitat fight and I believe we will need this tool, particularly since this type of construction can be accomplished by volunteers using no heavy machinery in areas that historically staff has been reluctant to attempt projects.

Nutrient vector

In 2003, the workgroup of the Oregon, northern California Coast Technical Recovery Team (TRT) convened to review and analyze information that could shed light on historical populations of Oregon Coast Coho salmon. The TRT created a document with their conclusions entitled "Identification of Historical Populations of Coho Salmon in the Oregon Coast ESU. In this document the TRT included many observations and conclusions regarding smolt size during out-migration. Using data from several years and many different basins the TRT concluded that smolt size was so varied both from year to year and basin to basin that smolt size data could not be used "in defining historical populations within the Oregon Coast Coho Salmon ESU".
Although the TRT concluded that data from smolt size exhibited considerable interannual variation, ODFW Staff chose to use this same type of data in a presentation to the Coastal Coho Conservation Stakeholder Team regarding Coho carcasses as a nutrient vector for stream productivity. In a presentation by Robert Buckman/ ODFW, the stakeholder team was told that data from ongoing lifecycle monitoring on a single stream indicated that smolt size had not increased immediately after large contributions of Coho carcasses. In data presented, Staff indicated that although returns of Coho within this particular basin had increased by at least a factor of 10, subsequent year classes of Coho smolts showed no increase in size from the added nutrients. Staff concluded that additional escapement of wild Coho above minimum escapement levels were thus unnecessary and provided no benefit to following year classes as increases in smolt size correlates to higher survival rates and without increases in size there were no population benefits.

This conclusion by staff that carcass benefits were not found is what I consider to be a form of the much popularized "junk" science. So shallow was the interpretation of this limited data set and so much how it supports the wish of staff that numbers of spawners will not interpret ecosystem robustness, this conclusion and subsequent absorption within the conservation plan should be removed from staff's thinking entirely. With this conclusion being contrary to the TRT's more robust observations, staff should be encouraged to rethink their personally held beliefs that additional spawners provide no benefit.

With salmon management we often find that both people and biologists are often over simplifying extremely complicated systems in an effort to mold them to their political interest. The following is my personal belief as to how complicated nutrient uptake from salmon carcasses can be. Because it is my personal hypothesis, I offer it only as an example as to how complicated the biology can be. I feel that any conclusion must consider the bioavailability of phosphorous and specifically organic phosphorus when trying to understand river system productivity and anadromous salmonid populations.

Phosphorus is theoretically the most limiting nutrient within Oregon's coastal river ecosystems. Although phosphorus only makes up 1% of organic matter, the amount of Phosphorus available to organisms is much less than the amount required relative to other elements. It has been hypothesized that if nothing else is limiting, then increasing phosphorus can theoretically generate greater than 100 times the weight of the added phosphorous in biomass within an aquatic ecosystem. It is important to remember that Oregon's coastal streams do not lack from elemental or inorganic phosphorous, but organic phosphorous. While inorganic phosphorous poses risks to water quality because of its ready uptake by algal communities and subsequent dissolved oxygen issues, increasing organic phosphorous must become recognized as important for ecosystem robustness. ODFW staff failed to consider in their presentation to the stakeholder team the timeframe of the dissolution rate for bone contained within the salmon carcasses. Bone is composed of protein, collagen and the mineral hydroxyapatite. Hydroxyapatite makes up nearly 70% of bone. Hydroxyapatite contains calcium phosphate, calcium carbonate, calcium fluoride, calcium hydroxide and citrate. It is the calcium phosphate found in bone that provides coastal river systems with the slow release bio-available organic phosphorous that will improve productivity. Staff's analysis and conclusion that nutrient loading from salmon carcasses failed to produce an increase in smolt size, failed to take into account the long time frame for the dissolution of bone and the release of phosphorous. The stakeholder team concluded in their notes from phase one of this process that calcium levels measured within a rivers ecosystems was a direct measurement of robustness, yet ODFW failed to connect calcium to the calcium phosphate found in the bones of salmon carcasses. Although I believe as staff does that populations of wild Coho juveniles are limited by stream complexity and places to hide from predators, population increases will eventually be dependant upon increasing smolt survivability and therefore increasing their size upon entering the out-migration phase of their lifecycle.

In Closing

This Conservation plan, in its current form, is devoid of the thought and precision that comprised the Coastal Coho Assessment. Fearful of being held accountable if any significant goal is set, the authors have fallen into the unspoken ODFW dogma that preaches language not of the character that is needed within our conservation plans, but the legal void that ODFW Staffers have seen fit to spew forth. Uninspired and uncreative, staff should look to include within this plan details and goals that are the benchmark of leadership. Staff should be encouraged to take a more philosophical view of presenting a

Conservation plan with numerical goals for all biological issues. Staff should not be fearful of any party or entity legally challenging future management based upon specific goals included within this or any conservation plan. Any challenge would need to surmount the hurdles of meeting legal burdens as well as biological certainty. In essence staff would have to be so off track regarding population management that even the courts could be persuaded to intervene. Something even staff would have to admit would be beneficial if their current plans for adaptive management go astray in the future. If staff's true goal is the proper management of these populations and not creating a document that fails to hold them or the state of Oregon accountable, then staff should set goals and ultimately be grateful to any one who helps correct any mistake.

Best regards
Thomas Way
McMinnville, Oregon

THEODORE R. KULONGOSKI
Governor

January 9, 2007

Mr. Virgil Moore, Director
Oregon Department of Fish and Wildlife

Mr. Tom Byler, Director
Oregon Watershed Enhancement Board

Mr. Marvin Brown, State Forester
Oregon Department of Forestry

Ms. Katy Coba, Director
Oregon Department of Agriculture

Ms. Louise Solliday, Director
Oregon Department of State Lands

Mr. Phil Ward, Director
Oregon Water Resources Department

Ms. Vicki McConnell, State Geologist
Oregon Department of Geology and Mineral Industries

Ms. Stephanie Hallock, Director
Oregon Department of Environmental Quality

Mr. Tim Wood, Director
Oregon Department of Parks and Recreation

Mr. Lane Shetterly, Director
Oregon Department of Land Conservation and Development

Mr. Matthew Garrett, Director
Oregon Department of Transportation

Natural Resource Agency Directors:

The State of Oregon is nearing completion of a two-year conservation planning effort for coastal coho. The Conservation Plan for the Oregon Coast Coho Evolutionarily Significant Unit has been reviewed by the public and will soon be presented to the Oregon Fish and Wildlife Commission for approval, as part of ODFW's Native Fish Conservation Policy requirements. Because NOAA Fisheries has decided not to list coastal coho as a threatened species, Oregon maintains management jurisdiction of this species and assumes responsibility for ensuring that coastal coho populations are fully recovered. I know this is an objective we all share.

The coastal coho planning effort included considerable agency input and public involvement. Successful implementation of the plan will depend on the commitments made by state natural resource agencies to fulfill statutory authorities and responsibilities for protecting coho habitat and conserving fish. I am confident that state agencies will continue to support the cooperative spirit of the Oregon Plan for Salmon and Watersheds in fulfilling their commitments to the Coast Coho Conservation Plan.

State natural resource agencies and their boards and commissions can provide visible leadership and support and I ask that you familiarize your respective board or commission with the plan and the commitments and obligations made by your agency and work with the chair and members to obtain their full endorsement.

I also want to point out that the governance structure for the Oregon Plan for Salmon and Watersheds has been revised to better implement the Coast Coho Conservation Plan and other future conservation plans. The revised governance structure will strengthen the linkages between my natural resources staff and the various technical and regional teams, will expand roles and responsibilities and will ensure stronger accountability by tasking the core team with overall leadership. Agency participation on these teams will be critical to effective implementation to restore habitat and conserve coastal coho for the benefit of Oregon and Oregonians. I ask you to ensure strong, effective representation in the governance teams.

I am personally counting on your strong leadership as Oregon, in concert with NOAA Fisheries, develops and implements recovery plans for listed salmon and steelhead across the state. Oregon will need to facilitate the collaborative development and implementation of these recovery plans so that Oregonians will willingly assist us in recovering listed populations. Although we face serious challenges in fulfilling our responsibility to recover these economically and culturally important species, I am confident that you and your staff are up to the task.

I appreciate the hard work your agencies do every day to help protect and conserve our valued fish resources and their habitats.

Respectfully,

THEODORE R. KULONGOSKI
Governor

TRK:sk:ab

c: Ms. Marla Rae, Chair, Oregon Fish and Wildlife Commission
Mr. Daniel Heagerty, Co-Chair, Oregon Watershed Enhancement Board
Ms. Jane O'keefe, Co-Chair, Oregon Watershed Enhancement Board,
Mr. Steve Hobbs, Chair, Board of Forestry
Mr. Bernie Faber, Chair, Board of Agriculture
Mr. Dan Thorndike, Chair, Oregon Water Resources Commission
Mr. Donald Haagensen, Chair, Dept. of Geology and Mineral Industries
Ms. Lynn Hampton, Chair, Environmental Quality Commission
Mr. Bill Gregory, Chair, Oregon Parks and Recreation Commission
Mr. John VanLandinghaun, Chair, Oregon Department of Land Conservation and Development Commission
Mr. Stewart Foster, Chair, Oregon Department of Transportation Commission

January 10, 2007

Commissioners
Oregon Department of Fish and Wildlife
3406 Cherry Ave. NE
Salem, Oregon 97303

Re: Coastal Coho Conservation Plan

Dear Commissioners:

We apologize for being unable to attend the January 11th Commission meeting to offer this testimony in person, however we wish for you to consider this testimony in your deliberations over the Coastal Coho Conservation Plan.

The effort by Oregon Department of Fish and Wildlife was commendable, the results, unfortunately, were not. The objective was to bring together all responsible agencies to develop a plan that recovers Oregon coast coho across all of its life stages. The approach – to set goals, find out where the fish are relative to those goals, identify what is the cause of the "gap," and to identify management actions to close the gap – is theoretically sound. As you can see from the volumes of comments on the record, this objective was not completely satisfied. We request that you return the coho plan to staff and the corresponding teams with directions to revise the plan to address the major concerns, namely establishing management actions aimed at the primary limiting factors of stream complexity and water quality.

We will not restate the multiple comments we have already submitted on this plan. There are indeed pieces of it that we support. We believe that the desired status is an improvement over the original proposal to simply set an abundance target, however have reservations after reviewing comments submitted by Drs. Frissell, Moyle and Williams. They raise significant questions about the robustness of the goal and the ability of the department to monitor and evaluate the population with enough sensitivity to be able to take appropriate action in a timely fashion.

We support the Department of Fish and Wildlife's approach to hatcheries. In watersheds where it was identified as a primary limiting factor, the hatchery program is proposed to change. This is exactly the cause and effect relationship we expected to see for all identified limiting factors and we commend the agency in this instance. We believe that the agency could have and should have had a similarly strong response to the presence and function of beavers. The Wildlife division has the authority to make substantial changes to beaver management to improve coho viability and in our opinion, has failed to do so.

For other areas outside of ODFW's jurisdiction, such as forestry, agriculture and water quality, we direct your attention to the recent comments submitted by the Environmental Protection Agency. They concisely summarize the problems with relying on existing management actions. The proposals by the Departments of Forestry, Agriculture and Environmental Quality, essentially the status quo, fall far short of what is needed for coho recovery. Our request to you to reject this first plan is in large part based on the shortcomings of other agencies – and highlights a flaw in the process itself in that no other agency actually adopts the plan.

We strongly believe that there are incredible opportunities to be had if the Commission sends the plan back to staff for further development. There was a complete lack of creative thinking because the agencies put forward all of the proposals and did not use the stakeholder team as part of the proposal/planning process. There are many additional opportunities for voluntary/regulatory approaches that went wholly unexplored in this process. There was, until the Technical Recovery Team got involved, a complete lack of independent scientific oversight, and when there was it resulted in substantial critiques of the plan. Direction from the Commission to host management workshops and vet the plan through an independent science team would result in a much improved plan, and hopefully one that comes much closer to meeting the federal guidelines for a recovery plan. It is notable that in the event that Oregon Coast coho return to the Endangered Species List, an action we are pursuing in court, this plan would have to be extensively revised to satisfy the recovery plan requirements under the ESA. To avoid that inevitable step, we recommend the Commission send the document back to the groups to be revised before approval.

Thank you for your consideration of these comments and your critical review of the Coastal Coho Conservation Plan.

Respectfully submitted,

/s/Kaitlin Lovell, Salmon Policy Coordinator
/s/Tom Wolf, Oregon Council Chair

Oregon Anglers

P.O. Box 253 • West Linn, OR 97068
(503) 655-4077 • Fax (503) 655-1357 • www.oregon-anglers.org

Comments on the Public Draft of the Coastal Coho Project
January 11, 2007

Overall, this project is based on voluntary compliance, which is also the key ingredient in The Oregon Plan for Salmon and Watersheds. We endorse this spirit of cooperation that most of the stakeholders exhibited, and is set forth in this document. But we observe that Oregon's fisheries are already constrained to the point of economic hardship in most coastal communities. At the outset of the "Oregon Plan", hatchery coastal Coho smolt numbers were reduced from 1,500,000 releases to 760,000. This plan calls for a further reduction to 260,000. This is an 83% reduction in the number of retainable Coho in a decade. Most ocean fishermen have switched from trying to catch a "keeper" Coho to fishing for rockfish, or just plain not fishing. This increased pressure has raised havoc with the rockfish populations, as you well know.

One of the weak points of this plan is that few of us will be around at the projected recovery time. When 50 years is the "most realistic" recovery scenario, and we manage to the weakest stock, many fishermen will see little use in continuing to support this effort. After all, who is going to see the results? Also the 50 year scenario is not affordable. This plan calls for monies that do not currently exist, and will not likely materialize in the foreseeable future.

In order to aid the funding dilemma, we should pick a couple of demonstration projects instead of using the "scatter the money equally around" approach, which will not show demonstrable results to congress, the state legislature, or to the public. This will have a sustaining effect, by showing some successes, on funding and voluntary compliance to keep the effort going over the long haul. We are not suggesting that we neglect the restoration of some basins. Merely keep in mind that public relations with the majority of your stakeholders and supporters will be a key to success.

A glaring weakness is the lack of a biological component to bring back Coho. Success is totally dependent on Coho responding to the increase of spawning and rearing areas. But if these areas are infertile from a lack of adequate numbers of returning adult carcasses, the likelihood of significant recovery is nil.
From ODFW's surveys of Coho redds the assumption of this whole plan is that there are inadequate numbers of spawners in most of our basins. Why are we not addressing the fact that unless we get more adults up the river to fertilize the spawning grounds the survival of fry will continue to be substandard. To see a successful model, look at the volunteer effort of Fish First on the Lewis River. This model incorporates both the restoration of the basin and the "boost" of fish populations by using conservation hatchery methods.

The use of conservation hatcheries in this plan was not even an option during its development. There is another even easier and cheaper option. Redd implantation with eyed wild broodstock eggs has been championed by Dr. Ernest Brannon for years, and has been implemented successfully by Tod Jones of the Clatsop County Economic Development Council's fisheries program. When coupled with carcass fertilization of the streams, this approach can greatly increase early survival. In Karluk, Alaska he restored a nearly extirpated run of sockeye using this method. This run was restored in seven years to the point that will allow annual harvest of ½ million sockeye.

Density dependent mortality (or overcrowding) is a claim that has been used by anti-hatchery factions to discourage any biological intervention. But it is not nearly the negative factor that some biologists claim, according to research by Achord, Levin and Zabel of NOAA and Dr. Robert Bilby. The success of multitudes of fry surviving is directly dependent on the fertility of the rearing grounds. To confirm this in a practical way we only have to look at Alaska streams that have no more rearing gravel than similar ones in Oregon. The difference is that wave after wave of fish come in to spawn, each species leaving a huge deposit of nutrients for their progeny, and that of the other species as well.

Our biologists look at spawning availability in a two dimensional aspect, which is very limiting, when in reality it is three dimensional. Again in Alaska many types of fish use the same spawning gravel, a run on top of the previous run, but they all seem to prosper.

When major changes are made, such as removing the Coho mitigation programs in the Salmon River, business-like plans should be made for evaluation of the re-establishment of the wild fish. Perhaps, since neither wild, nor hatchery Coho have been very successful in this river, it is better suited to other species. This would be a great opportunity to re-introduce a non-competitor like Chum. They would add to the sport fishery. They would be contributors to the nutrient level of the stream. Or perhaps, increasing the numbers of Steelhead or Chinook would be in order.

"The public's perception" of predation by sea lions, harbor seals, cormorants, and arctic terns is far more than just "speculative". Thousands of observations, many visually recorded, far outweigh a few brief and incomplete scientific reports.

Oregon's Vision for ESU Desired Status is stated on page 20, last paragraph:
"Ample opportunity will be given for people to fish for and keep naturally produced Coho in the ocean and in many streams, again, consistent with population-based conservation goals." I hope that this "ample opportunity" can assure the merchants, fishing guides, charter boat operators, and us fishermen that this sport will not die.

Dennis Richey

Dennis Richey, Executive Director

Jennifer Grace

From: ruby468@spiritone.com
Sent: Sunday, December 03, 2006 4:41 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho. Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Ruby Abrahams
5815 NE 26th Ave
Portland, OR 97211-6133

Jennifer Grace

From: lcardiff@comcast.net
Sent: Sunday, December 03, 2006 3:09 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

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I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho. Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Lynn Cardiff
2625 Englewood Ave NE
Salem, OR 97301-1610

Jennifer Grace

From: vneland@comcast.net
Sent: Sunday, December 03, 2006 3:54 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

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The coho deserve more than business as usual.

Sincerely,

Mary Neland
11421 NW EAST RD
PORTLAND, OR 97229-2502

Jennifer Grace

From: a_diephuis@yahoo.com
Sent: Sunday, December 03, 2006 9:18 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Wild Salmon are a beautiful and essential aspect of culture in the Pacific Northwest. Salmon bring vital and irreplacable health to our forests and watersheds. We cannot allow current trends to continue and bring this valuable species to extinction in our region.

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

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The coho deserve more than business as usual. Thank you for your time and concern.

Sincerely,

Andrea Mildrexler
PO Box 715

Joseph, OR 97846

Jennifer Grace

From: acurran_mail@yahoo.com
Sent: Saturday, December 02, 2006 10:06 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

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The coho deserve more than business as usual.

Sincerely,

Anne Curran
17184 SW Pleasanton Ln
Beaverton, OR 97006

Jennifer Grace

From: ceiverson@comcast.net
Sent: Friday, December 01, 2006 7:52 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

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The coho deserve more than business as usual.

Sincerely,

Caroline Iverson
5220 SE Alderway Ave
Milwaukie, OR 97267

Jennifer Grace

From: cynls11@hotmail.com
Sent: Friday, December 01, 2006 7:07 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

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The coho deserve more than business as usual.

Sincerely,

Cynthia Schwell
848 SE 178th
Portland, OR 97233

Jennifer Grace

From: grandmacharlottes@yahoo.com
Sent: Friday, December 01, 2006 6:00 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

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The coho deserve more than business as usual.

Sincerely,

Charlotte Stahl
1167 NW WALLULA AVE
GRESHAM, OR 97030-3666

Jennifer Grace

From: karen.andress@comcast.net
Sent: Friday, December 01, 2006 3:24 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

Karen Andress
8789 SW Bellflower St
Portland, OR 97224-5211

Jennifer Grace

From: sue1001@earthlink.net
Sent: Friday, December 01, 2006 3:07 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Susan Gries
6047 NE Mason St
Portland, OR 97218-2215

Jennifer Grace

From: ptrail@ashlandnet.net
Sent: Friday, December 01, 2006 2:03 PM
To: PLAN Coho
Subject: Wild coho need a stronger recovery plan

Dear Commission Chair Rae:

As a professional wildlife biologist and lifelong environmentalist, I am writing to urge strenthening for Oregon's draft coho conservation and restoration plan.

The draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring coastal coho populations. However, the actions specified are inadequte to meet full population recovery.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

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The coho deserve more than business as usual.

Sincerely,

Pepper Trail
2011 Crestview Dr
Ashland, OR 97520-3515

Jennifer Grace

From: Jim [dettajim@pcinw.com]
Sent: Friday, December 01, 2006 12:31 PM
To: PLAN Coho
Subject: coho conservation plan

Dear Gov. Kulongoski and ODFW,

I realize these comments are late but hopefully will bolster support for a deeper consideration of how the Coho plan can be made more effective and, over time, be successful in restoring Coho.

In our basin (Tenmile Lakes Basin) extraordinary volunteer and Watershed Council efforts to improve Coho habitat have resulted in some positive restoration of habitat and in hand with harvest regulations have also protected the vastly reduced numbers of spawning adult Coho in the system. Tens of thousands of dollars have been spent and cooperation among all the stakeholders in the Basin has been very high.

The problems of Coho are much more extensive in our basin than just recruiting more adult spawners into the system. Out-migrant suffer from vastly reduced juvenile rearing area in the system because of introduction of largemouth bass into the system in 1971. In turn, over the years, water conditions in the lake rearing area have enormously impacted the survival rate of outmigrating smolts.

Voluntary efforts have only succeeded in stabilizing Coho spawning success in the basin at levels significantly diminished from historic returns. Although this remnant can range up to ten thousand adults that is a far cry from the levels which were experienced as late as 1968. Although this population is characterized as "robust" by ODFW I view it simply as a concerted effort to reduce benchmarks over the decades to whatever level ODFW needs to maintain to carry on "business as usual". In one of their most ludicrous proposals ODFW has proposed a Coho fishery in Tenmile Lakes where the fish stage before moving up tributaries to spawn. This is a transparent attempt to open another recreational fishery to sell more licenses to keep paying for counterproductive hatchery programs and probably Dept. salaries. I don't dispute that the Dept. is underfunded or funded in such restrictive manner. Unfortunately, unloading Coho protection on volunteers is an extremely poor way to obtain the needed results.

The overly optimistic promotion of reliance on voluntary efforts does not correspond with reality in our basin. Stakeholders have all sacrificed for many years to ensure adequate protection for Coho and have made heroic efforts to preserve and expand suitable habitat. The effects of ODFW's false optimism concerning the actual state of Coho health in our basin is already leading to defection and disgruntlement among stakeholders. The Department seems to be suffering from an historical amnesia concerning the state of Coho in Oregon, and in particular our own area. The idea that Coho are not really far from being on the brink of extinction is delusional. One or two poor ocean years; major weather related catastrophes upslope and continuing degradation of water quality will not bring smiles to fishery manager's faces.

In the last round of Coho conservation planning, the Feds basically capitulated to Oregon's aggressive promotion of voluntary efforts. The criticism of their plan then generated significant and sometimes harsh remarks from NOAA and NMFS scientists. Have those criticisms been

answered and have the many loopholes in the previous plan been addressed in any meaningful way in the new plan?

They could well be and a model program might emerge. But it will never emerge without some kind of *guaranteed funding* in order to untie the hands of a Department that has been shackled to a "Harvest and Hatchery" mentality as the only viable way to maintain funding.

I'm not a pessimist by nature but after struggling with the Coho program in the Tenmile Basin for over 15 years we owe most of our success to a system that was so resilient that Coho have been able to maintain a kind of "hold-your-breath" status quo. We need mandatory protection for our Coho rather than relying on the whims and funding of ODFW and the always constant threat of the loss (sometimes complete!) of the very volunteers and stakeholders that are supposed to implement and be the backbone of the plan.

Sincerely,

Jim Thurber
Reedsport, OR.

***Coho must receive mandatory protection* if we are to proceed in a realistic way to recover them.**

Jennifer Grace

From: bobburch@verizon.net
Sent: Friday, December 01, 2006 11:06 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

Robert Burch
56965 Gladewood Rd
Coquille, OR 97423-8509

Jennifer Grace

From: nathaniel@olcv.org
Sent: Wednesday, December 06, 2006 3:12 AM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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Sincerely,

Nathaniel Applefield
5224 NE 20th Avenue
Portland, OR 97211

Jennifer Grace

From: rjmodlin@opusnet.com
Sent: Tuesday, December 05, 2006 10:15 PM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

Jilene Modlin
402 Monroe St.
Oregon City, or 97045

Jennifer Grace

From: cporach@mpdlaw.com
Sent: Tuesday, December 05, 2006 12:46 PM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

Curtis Porach
5035 NE Mason Court
Portland, OR 97218

Jennifer Grace

From: myjunkmail4336@yahoo.com
Sent: Tuesday, December 05, 2006 11:17 AM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

amber arquette
4336 SE 76th
PORTLAND, or 97206

Jennifer Grace

From: ensign@lclark.edu
Sent: Tuesday, December 05, 2006 8:29 AM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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The coho deserve more than business as usual.

Sincerely,

Dianne Ensign
11010 SW Boones Ferry Rd
Portland, OR 97219-7727

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:16 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: dsimpson@uoregon.edu [mailto:dsimpson@uoregon.edu]
Sent: Thursday, November 30, 2006 3:21 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

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Without adequate funding, effective recovery efforts cannot be accomplished.

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The coho deserve more than business as usual.

Sincerely,

Doug Simpson
249 South E St
Springfield, OR 97477

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:17 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: tks@hevanet.com [mailto:tks@hevanet.com]
Sent: Thursday, November 30, 2006 11:59 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction, setting specific criteria that must be achieved to restore coho populations. However, the actions are inadequate for restoration.

Oregon's coho recovery plan should include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but enforceable habitat protections are necessary to bring coho back from the brink of extinction.

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The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

Sincerely,

Tanya Schaefer
7425 SE 18th Ave
Portland, OR 97202-6134

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:18 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: dkempner@charter.net [mailto:dkempner@charter.net]
Sent: Thursday, November 30, 2006 11:44 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

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However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

DIANE KEMPNER
PO BOX 3104
COOS BAY, OR 97420-0404

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:19 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: aleita@cmug.com [mailto:aleita@cmug.com]
Sent: Thursday, November 30, 2006 7:59 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Aleita Hass-Holcombe
2022 NW MYRTLEWOOD WAY
CORVALLIS, OR 97330-1086

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:18 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: dvdjosmil@netscape.net [mailto:dvdjosmil@netscape.net]
Sent: Thursday, November 30, 2006 10:53 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

David Mildrexler
6309 NE BROADWAY ST
PORTLAND, OR 97213-4715

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:19 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: rhettlawrence@yahoo.com [mailto:rhettlawrence@yahoo.com]
Sent: Thursday, November 30, 2006 10:46 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Rhett Lawrence
6445 N Commercial Ave
Portland, OR 97217-2024

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:20 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: russellchapman@comcast.net [mailto:russellchapman@comcast.net]
Sent: Thursday, November 30, 2006 7:47 AM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

My ancestors (4 great-great grandparents) arrived in Oregon over the Oregon Trail in 1852. Their challenge was to tame Oregon. Today, our challenge is to recover some of its wild heritage.

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. Enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

Thank you for your consideration. We CAN restore some part the natural bounty that my ancestors found here in 1852. But we need to act decisively.

Sincerely,

Aubrey Russell
2741 SW Old Orchard Rd
Portland, OR 97201-1636

Jennifer Grace

From: oceantarts@pacifier.com
Sent: Wednesday, November 29, 2006 9:50 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho. Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Lenora Lawrence
PO BOX 233
OCEANSIDE, OR 97134-0233

Jennifer Grace

From: riversquid22@hotmail.com
Sent: Wednesday, November 29, 2006 10:56 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

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2. Guaranteed funding to support the state's efforts to recover wild coho. Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

travis dawson
po 2099
323d street
gearhart, OR 97138

Jennifer Grace

From: tracystravels@yahoo.com
Sent: Wednesday, November 29, 2006 10:42 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations. However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho. Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

tracy maier
2321 SE SHERMAN ST
PORTLAND, OR 97214-5559

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:31 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: psydneyh@aol.com [mailto:psydneyh@aol.com]
Sent: Wednesday, November 29, 2006 9:00 PM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

P. Sydney Herbert
5125 SW Dosch Rd
Portland, OR 97239-1252

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:23 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: andy-van-brocklin@comcast.net
[mailto:andy-van-brocklin@comcast.net]
Sent: Wednesday, November 29, 2006 8:19 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for coastal coho populations and their habitat.

Oregon's draft plan is a step in the right direction. However, the actions are inadequte to meet those goals.

I ask that Oregon's coho plan include:

1. Mandatory protections both for coho and their habitat.

2. Guaranteed funding to support the state's efforts to recover wild coho.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data.

The recovery plan must provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

Sincerely,

Andy Van Brocklin
6050 NW HAPPY VALLEY DR
CORVALLIS, OR 97330-9713

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:24 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: thanddel@quik.com [mailto:thanddel@quik.com]
Sent: Wednesday, November 29, 2006 6:43 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

As a former Alaska resident I think it important to stress how important this resource is both economically and to our enviornment.

Deloris White
17711 SW KINNAMAN RD
Apt# 25
Aloha, OR 97007-3118

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:25 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: kwitt@gbod.org [mailto:kwitt@gbod.org]
Sent: Wednesday, November 29, 2006 6:32 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Kevin Witt
2976 NE Oakley Ct
Bend, OR 97701-5854

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:23 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: marceyb@easystreet.com [mailto:marceyb@easystreet.com]
Sent: Wednesday, November 29, 2006 7:37 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals. We need to do more and do it before it's too late!

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual. Please hear us and give this serious consideration. Thank you!

Sincerely,

Marcey Balcomb
3106 NE 7th Ave.
PORTLAND, OR 97212

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:25 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: nonesuchplace@att.net [mailto:nonesuchplace@att.net]
Sent: Wednesday, November 29, 2006 6:23 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

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1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Nancy Baur
14288 SE JOHNSON RD
PORTLAND, OR 97267-2335

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:26 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: dreammagus@hotmail.com [mailto:dreammagus@hotmail.com]
Sent: Wednesday, November 29, 2006 6:15 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Richard Gorringe, Ph. D.
9111 NE SUNDERLAND RD
PORTLAND, OR 97211-1708

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:26 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: gewolfram@yahoo.com [mailto:gewolfram@yahoo.com]
Sent: Wednesday, November 29, 2006 5:11 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Gwen Wolfram
1525 NW 23RD ST
CORVALLIS, OR 97330-2407

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:30 AM
To: GRACE Jennifer C
Subject: FW: Strengthen recovery plans for coho, please

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: msmuggle@yahoo.com [mailto:msmuggle@yahoo.com]
Sent: Wednesday, November 29, 2006 4:35 PM
To: BUTTE Ann
Subject: Strengthen recovery plans for coho, please

Dear Governor Kulongoski,

Oregon needs a strong plan for conserving and restoring Oregon's coastal coho populations and their habitat. The drafted plan is a step in the right direction, but needs these additions:

1. Mandatory protections both for coho and their habitat.
2. Specified funding to support the state's efforts to recover wild coho.

For Oregon's future, we should err on the side of the salmon. The plan suggests current coho populations are sustainable, but this is not supported by data. This places a serious risk of error on imperiled coho populations.

Thank you for your attention to this matter and for your efforts on behalf of Oregon's environment and future.

Sincerely,

Marie Valleroy
6222 SW 36th Ave
Portland, OR 97221-3307

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:32 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: tom_thrall@hotmail.com [mailto:tom_thrall@hotmail.com]
Sent: Wednesday, November 29, 2006 3:28 PM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Tom Thrall
24020 NW Ridge Rd
Forest Grove, OR 97116-9266

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:33 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: jrdebi00@hotmail.com [mailto:jrdebi00@hotmail.com]
Sent: Wednesday, November 29, 2006 3:06 PM
To: BUTTE Ann
Subject: Please strengthen the wild coho recovery plan

Dear Governor Kulongoski,

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Joseph De Bin
2829 SE Belmont St. Apt. 104
Portland, OR 97214-4046

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:34 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: wedadopest@yahoo.com [mailto:wedadopest@yahoo.com]
Sent: Wednesday, November 29, 2006 2:38 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Jeramy Bray
1093 FIR ST S # 51
SALEM, OR 97302-4153

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:34 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: salmoneedshade@hotmail.com [mailto:salmoneedshade@hotmail.com]
Sent: Wednesday, November 29, 2006 2:34 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

"Salmon are Living Art and Food.
We can and must preserve their Masterpiece.."

Please keep this quote at forfront of your thought and action. Feel free to use this quote.

Dairy farms in the Tillamook area allow cows to the edge of streams. No streamside trees. Stream banks wash away. Thus, water temperature increases and silt goes to stream. What can we do to get cows out of steams and off of stream banks?

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. See first three paragraphs. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

Zephyr Moore
13665 SW Larch Pl Apt 19
Beaverton, OR 97005-3760

Jennifer Grace

From: BUTTE Ann * Governor's Office [Ann.Butte@state.or.us]
Sent: Thursday, January 18, 2007 11:38 AM
To: GRACE Jennifer C
Subject: FW: Please strengthen the wild coho recovery plan

Follow Up Flag: Follow up
Flag Status: Red

-----Original Message-----
From: johnj.cox@comcast.net [mailto:johnj.cox@comcast.net]
Sent: Tuesday, November 28, 2006 4:33 PM
To: PLAN Coho
Subject: Please strengthen the wild coho recovery plan

Dear Commission Chair Rae:

Oregon should adopt a strong plan for conserving and restoring Oregon's coastal coho populations and the habitat they need to survive.

Oregon's draft plan is a step in the right direction because it sets out specific criteria that must be achieved in restoring their populations.
However, the actions are inadequte to meet those goals.

I ask that Oregon's coho recovery plan include:

1. Mandatory protections both for coho and their habitat. The draft coho plan suffers from the flawed assumption that our land use policies will protect coho and their habitat from further decline. Voluntary efforts are an important part of long-term recovery, but right now enforceable habitat protections are necessary to bring coho back from the brink of extinction.

2. Guaranteed funding to support the state's efforts to recover wild coho.
Without adequate funding, effective recovery efforts cannot be accomplished.

3. Err on the side of the species. The plan suggests current coho populations are sustainable, which isn't supported by data. This places a substantial risk of error on imperiled coho populations that can't afford any errors right now.

The recovery plan not only needs to address the above issues but also provide enough immediate habitat protection to give the longer-term recovery plan time to take hold.

The coho deserve more than business as usual.

Sincerely,

John Cox
3026 SE 39TH AVE
PORTLAND, OR 97202-1615

From: RICHARD CALVERT [mailto:richardscott1947@yahoo.com]
Sent: Tuesday, November 14, 2006 10:27 AM
To: PLAN Coho
Subject: Comments on Plan

To: cohoplan@state.or.us
From: Richard Calvert
PO Box 134
Bandon, OR 97411
RE: Coastal Coho Conservation Plan

I've comments about the diminishing numbers of salmon runs in the Pacific Northwest.

It seems that there is plenty of hand wringing and shaking of heads when it comes to deciding on a course of action. I have to ask why government officials continue to ignore predation and unequal rights to harvest salmon.

Regarding predation, seals and sea lions continue to be allowed to continue their massive destruction of these fish runs. Where are the studies about the devastation these mammals cause to salmon? Where are the government officials who can make the tough decisions to control their unlimited propagation? When if ever have any kind of controls been enacted to limit them to a reasonable number? Oh, they have such mournful, pretty brown eyes. This seems to be more important compared to the destruction of the fishing industry and lives of the Americans dependent upon it.

The second group of predators that seem to be allowed limitless propagation are the birds that prey on smolts. In this category you have fish eating fowl such as mergansers and cormorants, to name just two. Mergansers can be hunted during the fall waterfowl hunting season. How about cormorants? To my knowledge there is no control of these birds. Where is the study about the numbers of these birds? Where are the details about the number of small fish consumed by them? Why are there no controls, or as in the case of mergansers, ineffective too limited controls?

Our nation seems to pride itself on nondiscriminatory practices. However, when it comes to Anglo Americans, it's open season on discrimination. Why is preferential treatment given to Native Americans? Isn't it convenient that the United States government can choose to "lawfully" discriminate against citizens because of their race, creed, or national origin when it so chooses? Officials can come up with all kinds of wonderful excuses to continue government's discriminatory practices, but the bottom line is that all citizens of this country are in the same predicament: dwindling salmon numbers. Don't you thinks it's time to look at the larger picture? Or does my government think it's more important to destroy the Pacific Northwest's fishing industry for the sake of allowing a segment of society to continue to over harvest salmon?

cc: Senator Gordon Smith, (202) 228-3997
Senator Ron Wyden, (202) 228-2717
Representative Peter DeFazio, (202) 225-0032
Governor Ted Kulongoski, (503) 378-6827

Senator Jeff Kruse, (541) 440-3097
Representative Wayne Krieger, (503) 986-1336

From: Brenda Gaines [mailto:brendad@pioneer.net]
Sent: Wednesday, November 15, 2006 8:44 AM
To: PLAN Coho
Cc: Brenda Gaines
Subject: Coast Coho Conservation Plan

On the Coast Coho Conservation Plan;

Why are no proposals to change even a single regulation.

Research should be funded to cover the study of effects of likely toxics such as herbicides, pesticides, fertilizers, and lead from sinkers. If these are shown to be getting into the water, wider buffers should go into effect.

There should be an incentive (tax credit?) for people who are willing to give up all or part of their water rights to fish use.

If measure 37 claims are allowed to degrade essential habitat, the damage needs to be mitigated, hopefully at the expense of those who profit from measure 37.
The recommendations of the Independent Multidisciplinary Science Team (dated 7/15/2002) should be implemented.

More research should be done in the Lakes systems since they differ considerably from the better studies rivers.

ODF rules should be modified to leave wood in intermittent drainages as source wood to naturally provide wood to creeks.

Funding should be provided to stop development of homes in flood plains, probably through conservations easements.

Brenda Gaines

93706 Swamp Creek Road

Blachly, Oregon 97412

GNRD

86814 Sydnam Lane
Bandon, Oregon 97411
December 6, 2006

Governor Kulongoski
160 State Capitol
900 Count Street
Salem, Oregon 97301-4047

Governor Kulongoski;

I am Tom Forgatsch, an ex Coho Commission member appointed by you. I represented Agriculture in Oregon. I have enclosed two short papers for your view. The first one is from the Coho Commission 2 ½ years of meetings working on the draft. I have put forth a few solutions that will go a long way to improving Coho/salmon in Oregon. All of these actions are low cost and offer short time results, not the 50 year proposals of the Coho draft.

The second short note is about a way to decrease wave damage to coastal Oregon. One of my degrees is Geology/Marine Biology (double major) and I have been trying to educate coastal population about tsunami and earthquakes for the past 16 years. I know Oregon can not afford the cost of a full coastal length hit of a Cascadia quake and resulting tsumani. Therefore I believe we need to use O.S.U.'s wave tank to study placement and application of tetra pods.

Thank you.

Tom Forgatsch

Tom Forgatsch

Date: December 6, 2006

To: Governor Kulongoski

From: Tom Forgatsch

Re: Proposal for Creation of Wave & Tsunami Abatement Project

Proposal

I recommend the creation of a state-funded project to research the viability of a low-cost, habitat-friendly coastal defense against potential damages resulting from large wave activity or tsunami. This defense would be accomplished through the placement of tetrapods in strategic off-shore (rather than the conventional on-shore) locations.

Current Situation & Process

Currently, there is no protection to the Oregon coast from a potential tsunami or large wave. As recently seen in Crescent City, Ca, even a small surge can result in hundreds of thousands of dollars in damage. A larger wave reaching shore in any of Oregon's coastal communities could result in significantly higher financial losses. The impact to coastal residents and businesses could be substantial.

Other than warning systems, there have been few solutions created to defend against an actual wave. One creation is the tetrapod, a concrete structure shaped like a "jack" in the "ball and jacks" game (photos attached). Weighing 25+ tons, tetrapods have been placed on ocean break walls to help "break up" the physical wave at the shore before it hits occupied areas. These have had only limited success.

Recommended Process

I believe tetrapods can be a reliable defense, but not in their current positioning. The same wave control could be used to decrease energy in the ocean bar areas of the coastal harbors through the creation of tetrapod "reefs." The goal is to force the waves to spend as much of their destructive energy as possible offshore, before making landfall.

Tetrapod reefs, consisting of three submerged rows of tetrapods (two forming the base, one row atop the two) in a crescent shape, could protect harbors during tsunami or winter wave activity. In addition to harbor protection, tetrapod reefs should also be created parallel to shore, in areas of exposed beach – example: Seaside, Waldport, or Cannon Beach, Oregon. . This reef would disrupt the wave, forcing the wave to

"go vertical," and break as white water prior to reaching the shore. A side effect of the reef, near harbor entrances, would be a decrease in incoming wave energy (lessening sand transport), assisting the natural cleaning of the harbor/estuary channel during peak winter fresh-water flow.

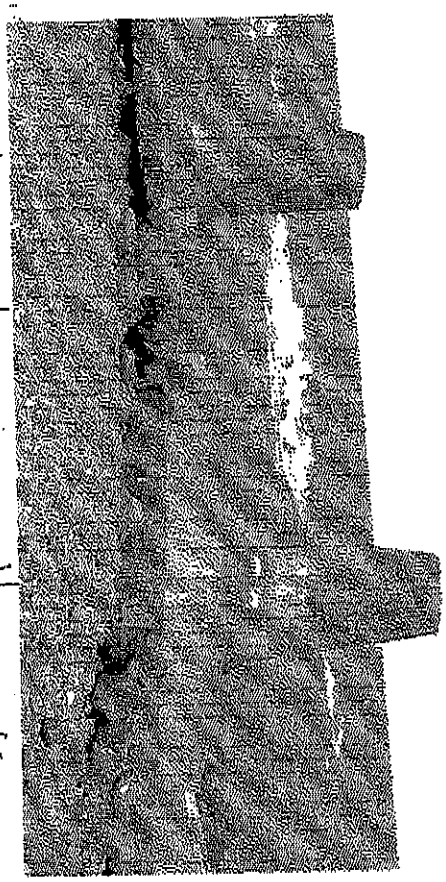
We are fortunate to have one of the largest wave tanks in the United States at Oregon State University. OSU is an ideal location to research the viability of this recommendation, as well as to test and improve tetrapod shape, weight, placement, sand transport impact and ideal reef depth. The building of the pods could be done in Oregon (Crescent City uses tetrapods that were built by Reedsport Sand and Gravel). Tetrapod reefs would also need to be included in coastal maps.

Additional Benefits

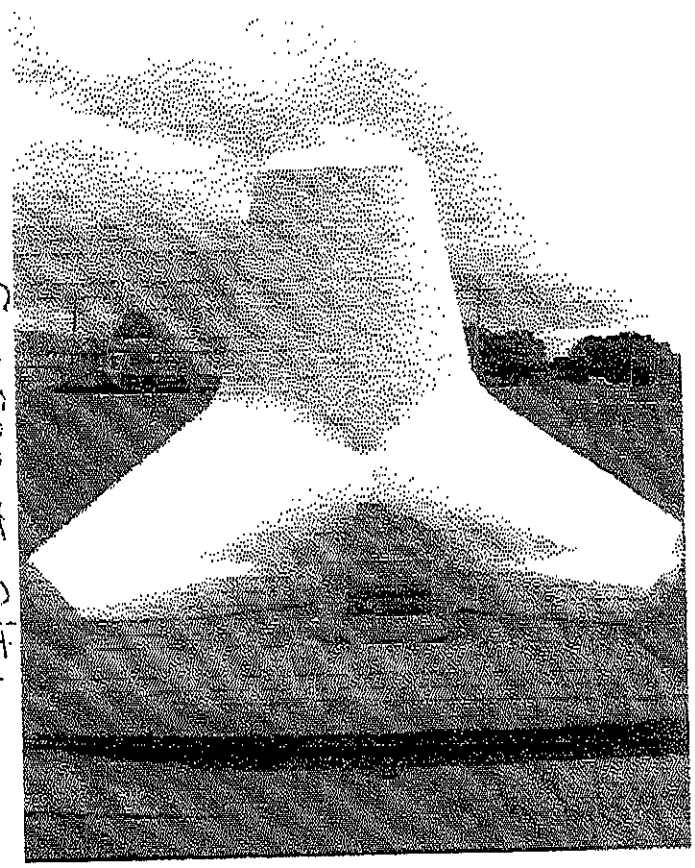
Besides reducing potential damage to coastal communities from significant wave activity, additional benefits to the creation of tetrapod reefs include:

o Increased habitat for coastal aquatic life, including crab, salmon, various fish, abalone, etc.
o Improved economic development through increased fishing time and safety of bar entrance and exit
o Increased tourist dollars for scuba diving to the reefs
o Creation of new and safer offshore surfing areas

Thank you for your time and consideration of this proposal. Please do not hesitate to contact me personally if there are any questions or additional information needed. My phone number is: 541 347-9071.

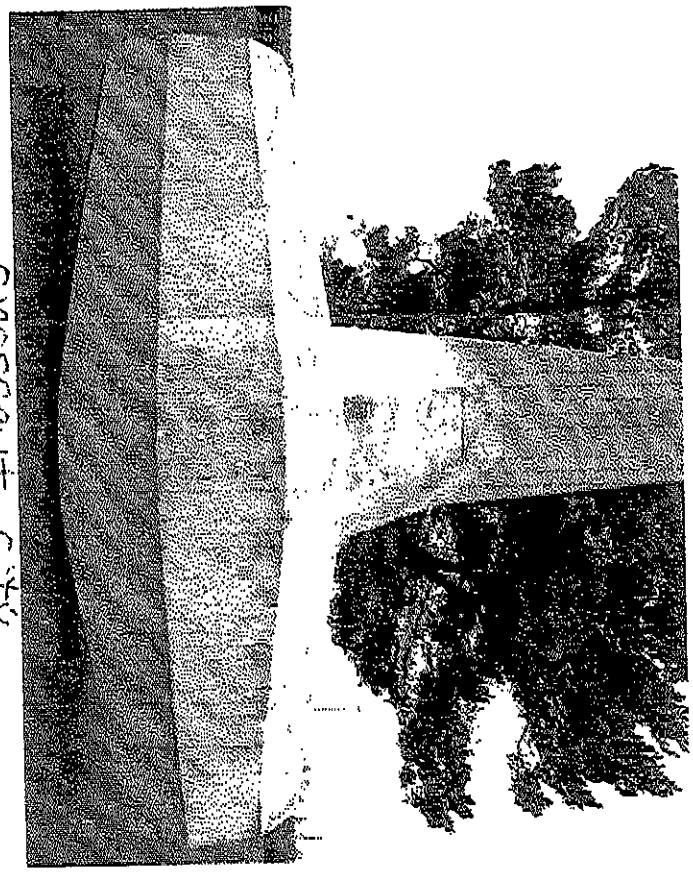


Laupahoehoe Hawaii



Crescent City

Crescent City



Crescent City

Problem Analysis of Old World Salmon Restoration
Submitted by Tom Forgatsch

This short discussion is my attempt to list problems and solutions for Coho restoration. In identifying solutions, I have approached each problem with a non-political, analytical review to create a KISS (keep it simple, stupid!) fix-it list. These solutions can be implemented to aid the solution to increased Coho viability and restoration.

Oregon Coho salmon have been replaced by more genetically adaptable species of fish. Coho are "Old World" in that they reproduce only one time, and then die. The "New World" genetics have already replaced the species by a new variety (i.e. Atlantic salmon) that spawns multiple times prior to natural death. However, it is socially and economically important to help the Coho survive and flourish.

A major impact to the survival of Coho is the human effect. Human-caused problems have led to numerous environmental issues that affect Coho. With that in mind, it is possible to extend Coho survival periods by solving these human-caused problems.

The following is a list of specific problems and proposed solutions to improving Coho restoration, in a shorter time line than "five or more decades" to achieve. Significant time and money has been spent on a model based on incorrect assumptions. We need results based on prior data, actual needs, and fixable problems.

Problem: Loss of Coho natural habitat
Solution: Coho use both ocean and fresh-water habitats.
--*Ocean habitat:* create artificial reefs (made of unwanted ships, tires, concrete terra pods or waste concrete) in areas lacking in natural reef habitat, to provide cover, shelter and substrate for animals and fish. This will improve both the rockfish habitat and natural food for Coho, such as anchovies, sardines, and herring. The terra pod placement at the off shore entrances of coastal harbors would also provide tsunami protection, as well as habitat for marine life and scuba divers. Cost is recoverable via increased fish habitat and recreational use.
--*Fresh-water habitat:* Use the new conservation security program funding to develop land use and habitat for Coho. Example: #1 Excavate waterways and stream channels back to pre-sedimented conditions. #2: Dig off channel sumps (alcoves) for water storage and fish nursery. This will allow fingerlings to escape high flow periods and find places for feeding. #3: Construct more permanent in-stream and off-

channel cover/debris placement. This is to control high water flow losses of debris placed in stream for cover. #4. Dig deep pools in various sites along a stream course (depth of 10 to 30 feet).

Problem: Improve hatchery care and management
Solution:

- #1 Do not use chemicals and fish food that are known to cause problems. For example, the use of formalin and antibiotics on both eggs and fry cause problems in growth and development. Substitute the use of UV light for fungus and bacterial control. The use of ozone and O2 levels for bacterial and fungal control also use potassium permanganate or methylene blue for fungal control
- #2 Improve oxygen monitoring in transporting and growing situations where crowding causes depletion of oxygen and developmental damage in the fry.
- #3 Extend the period of time that eggs and/or fry are kept in the water that they will be released in thereby allowing them to identify their water release area (cut down stray rate).
- #4 Increase the fry hold time in order to allow a larger size of fish at release time.
- #5 Improve conditions at fish release time. Lower the predation rate on fry by sonar use of fish/predator sounds. Using seal sounds to lower striped bass population prior to fry release. Stagger the release times and lower release counts at each release – use multiple release periods and use nighttime release periods. Release smolts during striped bass spawning time. No massive dump the truck and run behavior.

Problem: Need to expand and fund more Step Programs.
Solution: Involve more of the population in improving the **quantity and quality of the fish released**. The Step Program provides a link between the recreational fishermen and the behavior they enjoy. One thing we can be sure of is that the population of recreational fishermen will not be decreasing. More money is brought to Oregon through recreational fishing than by commercial take. The Step Program produces a fish that has a longer time to "identify the water" of the release streams; therefore, lowering the stray potential. It is my and other people contention that the Step Program fish are better quality, stronger fish than hatchery raised fish.

Problem: Depletion of natural nutrients in Coho habitat
Solution: Develop an administrative rule that allows all recreational fishermen to do a "commercial cut" on fish at the time of catch. Reasons:

- #1 Put the nutrients back into the environment where they are needed. Nothing is wasted in nature. Removal of these nutrients causes depletion of limiting factors that belong in the water not in the landfill.
- #2 Quick cleaning of fish at catch time improves taste/flavor of fresh fish.

Problem: Administrative rule vs. Ecological needs
Solution: Eliminate the administrative rule (general restriction #15) that makes it unlawful to "dispose of dead animals (fish) carcasses or parts there of, in Oregon waters"

- "Why #1" Those carcasses need to be placed back into the waters where they belong. The environment needs nutrients replaced as not to cause a limiting factor example: calcium for bone development.
- #2 Need to put the Oregon State Marine Board in lawful behavior. The Marine Board sponsors and finances fish cleaning stations, many of which dump fish waste back into the waters of Oregon.
- #3 Need to put Oregon Dept. of Fish and Wildlife back into legal behavior for dumping fish carcasses into streams. ODF&W has to obtain permission from itself and DEQ to dump carcasses to enhance stream nutrient levels. It has been well demonstrated that this dumping is a definite improvement in replacing "limiting factors" back into the waters of Oregon.
- #4 Need to do away with the odor and health hazard of trash dumpsters with dead fish waste in them.

Problem: High mortality rate for catch and release fish
Solution: Alter catch and release rules to first limit caught is kept. This will decrease mortality rate now estimated between 16% to 60%. The use of magnesium alloy hooks that will dissolve in salt water can increase survival rate, just cut the line without handling the fish.

Problem: Misuse of data collection
Solution: Use "local ports" catch and use reports to micro manage

each port zone. Alter catch and season rules to match port catch data. No statewide "shot gun" application of season/limit rules.

Problem: Inaccurate fish catch data collection
Solution: Do not skew the data collection process by picking the "best boats" over "poor boats" for catch data numbers. No secondary agendas to show a higher catch rate than was actually caught

Problem: General public confusion with current law
Solution: Simplify Fish and Game rules/laws/regulations to lower confusion. The general public has found present rules and regulations confusing and misleading. Better inform the fishing public as to when, where and how to fish for specific fish varieties. More "public relations" for positive information approach to the fishing public. The pass action on the rockfish situation was not handled very well.

Problem: Financial waste
Solution: Spend money on long-term more permanent projects that have data to show that they work. Do not waste money on projects that are wiped out each year. Example: the fencing and tree planting that are removed by yearly winter floods.

Problem: Affect of global warming to local environment
Solution: Global warming. This is a natural process that we are adding to and have no major control over. By off-stream impoundments and scattered deep-water pools, we can develop cooler water by increased water flow and deeper in stream pools. The use of stream shading is not as effective as increased water flow and deeper channels.

Problem: Smolt feed effecting fish health
Solution Alter food stock for smolts. Use no food with urea as an ingredient. Feed out smolts prior to release into "home" water. Do not feed smolts with surface floating feed. It trains them to feed on the surface where they are easier prey to birds and other surface feeding predators.

Problem: Decline in habitat conditions
Solution: Habitat:

- Increase gravel beds in spawning areas. Example 10 Mile Lake.
- Increase over winter, off channel deep pools (alcoves).

- Increase in channel deep pools (over 10 feet deep).
- Increase channel debris and buffer zones.
- Use Wildlife Habitat Incentives Program's (WHIP) Salmon Habitat Restoration Initiative monies (part of 2.8 million to Oregon, Alaska, California, Idaho, Maine and Washington). Provide incentive payments and tax incentives to private and commercial landowners to implement best management practices and land use.
- Use Natural Resources Conservation Service "Equip" program to dig "sumps" with gravity, valve controlled drains. The sumps would be used to release winter-stored water during times of low flow and temperature problems.

Problem: Data not being collected
Solution: No purchase of new harvest punch card tags until original first issued tag is turned in completed, truthfully. Make this data useful and timely. Currently new harvest tags can be bought without turning in the original tag.

Problem: Predator impact to Coho
Solution: Predator control: 1. Use night releases in various places. 2. Lower the smolt release count with increased release points to decrease bird predation. 3. Use Marine Mammal Act to control/remove "nuisance" animals. 4. Use sound tracts of transient Orcas to control seal feeding.
5. Striped bass have been shown to stop feeding during spawning. Release of smolts at that time will cut losses.

Problem: Water shortages
Solution: Addition of in-stream dug sump reservoirs. Water impoundment in the upper reaches of all streams where water quantity and/or water quality are the primary or secondary "bottlenecks" for Coho population. This extra winter storage could be released during seasonal low water flow. The release could lower water temperatures, increase oxygen levels and improve water quality of the listed streams. We do not have a water quality or quantity problem; we have water storage problem. Two of the primary and fifteen of the secondary limiting factors are related to water quality or quantity (see second draft "limiting factors chart").

Problem: Poor Ocean conditions – up welling
Solution: As many as 99 percent of juvenile Coho in a given migration

year failed to survive at sea, according to the Coho second draft report. An aid to better sea conditions would seem to be important. One type of "fix" has been used in Hawaii to develop local up welling. The research project on the Big Island pumps deep-sea bottom water to the surface. The water is then run through tanks of abalone, shrimp, algae etc. for aquaculture purposes. The used water is dumped back on the surface water to be recycled – thus causing a local up welling effect. This effect, along with developing reefs to provide mid water habitat for Coho food chain members, could affect smolt survival rate at sea. This reef habitat would also increase other fish habitat. The economic boost to the fisheries harvest would pay for the reef placement.

Problem: Online information is out of date or unavailable
Solution: Place new informational bulletin on the statewide license computer system. When vendors go on line to purchase fish and hunting licenses have "pop up" information on any catch or new fishing/hunting restrictions.

Significant time and money has been spent on a model that is based on very little data and incorrect assumptions. We need results based on prior data, actual needs, and fixable solutions. I have previously provided these ideas to the Stakeholders team members.

Since June of 2004, when I agreed to participate as a non-paid member of the Stakeholders Team, I have listened, watched and reacted to the politics of the many self-justifying parties on the team. There are strong political and economic agendums that appear not to have Coho survival and reproduction as their primary goal.

The major conclusions I had from those many meeting are:

1. Follow the money trail. There are more paid positions and more layers of employment.
2. If members really cared about salmon recovery, they would try to implement some easily fixed solutions along with the long-term activities. A fifty-year time line is not a solution it is a CYA behavior.
3. Politics of the Stakeholders members does not allow for implementation of doable solutions. "Either do it our way or we will sue you".
4. The second draft of the conservation plan says a great deal and covers all the aspects, but fails to take any immediate actions.

Despite this, I am again submitting my list of recommendations. These simple solutions can be implemented swiftly and with minimal cost. It is based on problems and solutions I feel could be accomplished to the benefit of salmon, other fish, and human needs for fish.

Tillamook County

Land of Cheese, Trees and Ocean Breeze

201 Laurel Avenue
Tillamook, Oregon 97141

Tillamook County Commissioners
Tim Josi, Mark Labhart, Charles Hurliman
503-842-3403
FAX 842-1384
TTY Oregon Relay Service

November 29, 2006

Oregon State Department of
Fish and Wildlife
Attn: Kevin Goodson
Conservation Planning Coordinator
3406 Cherry Avenue NE
Salem OR 97303

Re: Comments on the Draft Coastal Coho Plan for Oregon

Dear Mr. Goodson:

After review of the Draft Plan and discussion at our November 22, 2006 meeting, we, the Board of Commissioners supports the Draft Plan subject to the following conditions and comments:

1. The Plan should continue to be voluntary. Land owners in the lower watersheds have done much in the way of fencing, planting and habitat improvements. Continued cooperative efforts between land owners and regulatory agencies will go a long way to achieving success with this plan.

2. Implementation should be kept free of politics. One way to ensure integrity in Plan implementation is to include local representation and landowners on the new Core Team and Implementation Team.

3. A part of the Plan or in the early stages of implementation, identify particular project or kinds of projects that aide implementation. Stream barbs are one example of a type of project that benefits both landowners (erosion control) and fish (adding stream complexity). There are certainly other types of projects with such dual benefits. Once identified, create a streamlined permit process for such projects. One or more demonstration projects may help create standards.

Thank you for the opportunity to comment on the Draft Plan.

Sincerely,

BOARD OF COMMISSIONERS FOR
TILLAMOOK COUNTY, OREGON

Tim Josi, Chair

Mark Labhart, Vice Chair

Charles J. Hurliman, Commissioner

cc: Sue Knapp, Governor's Natural Resource Office

G:\LETTERS\SupportDraftCohoPlanwChanges2006.doc

Comments on the Science Underlying Oregon's Proposed Coho Restoration Plan

15 December 2006 FINAL

Christopher A. Frissell
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The Pacific Rivers Council
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wwww.pacrivers.org

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Jack E. Williams
Senior Scientist
Trout Unlimited
329 Crater Lake Avenue
Medford, Oregon 97504

Peter B. Moyle
Department of Wildlife, Fish, and Conservation Biology
University of California
1 Shields Ave
Davis CA 95616

TO: cohoplan@state.or.us, Oregon Department of Fish and Wildlife, 3406 Cherry Avenue N.E., Salem, OR 97303 (Re: Coho Plan).

Introduction

Collectively, as the four coauthors of this letter we have invested a substantial amount of time over several years reviewing the state of Oregon's plans for restoration

of Oregon coastal coho. The state has developed an impressive body of information relevant to the recovery of coastal coho populations. However, our review of the most recent draft document, the *State of Oregon Conservation Plan for the Oregon Coast Coho Evolutionarily Significant Unit*, reveals the repercussions of earlier weaknesses in the scientific assessment, known as the *Oregon Coastal Coho Assessment Part 2: Viability Criteria and Status Assessment of Oregon Coastal Coho*, dated May 5, 2005. In our view, certain key assumptions of the May 5, 2005 Assessment, which were raised in previous public comment but not adequately addressed in the final version, seriously jeopardize the likely success of the proposed Conservation Plan. Hence both documents rest on some puzzling and potentially crippling oversights that likely undermine and jeopardize the success of the restoration plan. We will describe these concerns in some detail below. We would be happy to engage in further dialogue on these matters if that would help clarify and settle these concerns.

To prepare these comments, we read the aforementioned documents, relevant portions of public comment on the draft Status Assessment, and consulted salient scientific literature. Our comments here do not pertain directly to the question of whether or not federal listing of Oregon coastal coho salmon is warranted, but concern only the scientific issues that underpin restoration or recovery planning.

Why Are the Science Issues Critical to the Conservation Plan?

A clear and substantiated assessment of biological status is critical to ensure that any conservation plan is likely to be successful. In the case of Oregon coastal coho, the Status Assessment sets the context of not just the level of threat, but the relative importance of various threats and the urgency of action to address them. The scientific context profoundly affects perceptions of level of acceptable risk associated with the status quo, the urgency of actions to alleviate specific threats, and the relative cost or risk of allowing additional incremental losses of habitat. *In particular, the Assessment profoundly shapes the Plan's assumptions about the adequacy of existing freshwater habitat conditions, of the success of existing regulatory mechanisms, and of urgency of restoration and improvement of freshwater habitat conditions.* Finally, the notion that uncertainty of success of incremental actions proposed in the recovery plan can await the outcome of monitoring and so-called "adaptive management" is also critical. This notion depends on problematic scientific assumptions about both the resilience and vagility of existing coho populations, the adequacy of existing and future freshwater and marine habitat, and also about the ability of managers to rapidly evaluate coho population status and trend.

Six Factors of Concern

Our review focuses on a small set of core scientific issues that will need to be fairly and fully addressed in order to ensure the likelihood of success of a coastal coho recovery or restoration plan. Each of these concerns was raised in public comment on

the Oregon Coastal Coho Assessment, yet each was addressed only incompletely or not at all in the State of Oregon's response to comments and in the Final Status Assessment. We also referred to the original ESA petition filed with the National Marine Fisheries Service by The Pacific Rivers Council et al. (1993), and found that the basic outline of our concerns were identified and anticipated in that document, which perhaps should have played a more formal role in shaping the state's status assessment and conservation plan.

Our concerns fall into six categories briefly summarized here: 1) the modeling of coho population dynamics is strongly determined by questionable functions for survival at low density and for rapid dispersal and recolonization; 2) the model and the assessment overall ignore available empirical data directly pertinent to the extent and persistence of local extinctions, instead embracing model behavior that is inconsistent with the outcome of progressive local extinctions; 3) the assessment and conservation plan are based on highly questionable, mostly arbitrary assumptions about population structure that may bear little relation to real-world demographic and genetic pattern and process within the species; 4) a very key assumption that future environmental conditions never will get any worse than those seen in recent decades is never examined or justified, and appears to be highly questionable; 5) freshwater habitat is well-recognized to be the primary manageable element that is necessary for Oregon coho restoration, but the plan relies on tenuous, often unstated assumptions and passive, ill-defined and vaguely justified habitat conservation measures; 6) the conservation plan assumes that the results of incremental management will be quickly discernible in biological monitoring, but the basis for this assumption is unexplained, and the record reveals little or no critical examination of relevant literature that suggests highly precautionary conservation measures are warranted.

An important context for all of our points is established by an examination of the phenomenon of local extinction. This is a point of emphasis in the 1993 petition (Pacific Rivers Council et al. 1993, pp. 14-15) where local extinction was discussed in the context of maintaining the species across its range:

> **The coho salmon consists of a highly organized network of dynamically connected, locally adapted populations. Each population is locally adapted due to the effects of an environmental template and natural selection regime that is unique to each population. While each population has accumulated a unique combination of adaptive traits that cannot be duplicated or replaced in the span of a human lifetime, inbreeding depression and speciation were historically minimized or prevented by the infrequent but periodic exchange of individuals between neighboring populations. Since suitable habitats and thus coho populations are often small and relatively isolated, such occasional exchange of individuals (especially fish well-adapted to geographically nearby and similar habitats, and thus likely to reproduce successfully) between adjacent populations is beneficial.**

The maintenance of such a dynamic metapopulation structure, and the interpopulation diversity associated with it, is necessary to ensure the future of the species and its role in ecosystems. This means that each breeding population, is geographically, evolutionarily, and ecologically distinct, perhaps at as fine a scale as individual spawning tributary streams and major river reaches. Either the cumulative depletion or extinction of many populations, or the fragmentation and severing of natural linkages between populations, can precipitate rapid extinction of the species across large portions of the its range (Frissell 1993). Coho salmon are immediately threatened by both kinds of impacts.

Complex metapopulation structure is adaptive in a region subject to frequent catastrophic disturbance, such as volcanism, earthquakes, sea level change, large landslides, flooding, and wildfire (Frissell 1993). When such disturbances cause local extinctions, coho from adjacent populations colonize and eventually re-establish populations. Natural colonists of local origin, unlike hatchery fish or foreign stocks transferred from distant locations, are likely to be relatively well-adapted to the empty habitat by virtue of geographic proximity and environmental similarity. Thus given sufficient time they can successfully restore the former range of the species. Because the life span of a single population is likely to be less than a few thousand years or perhaps centuries, maintenance of a broad distributional range and an expansive network of such populations is critical for the long-term survival of the species as a whole. Large-scale fragmentation and collapses of range, such as coho have exhibited in California and the Columbia Basin this century, indicate that metapopulation structure and function is breaking down catastrophically, and that remaining populations face greatly increased risk of extinction.

Model Limitations and Uncertainties

1) Survival and Dispersal Assumptions

The Density-Dependent Population Growth Rate Recruitment Model used in the State of Oregon's Assessment – based on the Ricker population recruitment function with an added marine survival variable –models the average behavior of aggregates of populations. It does not directly emulate or otherwise account for the process of extinction of local breeding groups. Our contention is that a model that cannot simulate local extinctions under plausible range of conditions should not be taken as evidence that local extinction is not happening, or is not important. The fact is that progressive local extinction could be occurring in the wild, and this would be obscured by the way the state has modeled coho dynamics, rather than revealed by it. The fact that the model

cannot simulate local extinctions, despite considerable evidence that these have in fact extensively occurred (see below), suggests it is not extinction in the real world that is unlikely, so much as that the accuracy of certain model assumptions is unlikely.

It appears that extinction resistance and robustness to fluctuating environmental conditions in the Oregon Assessment model are determined by three important factors: 1) virtually infinitely increasing density-dependent survival at small population sizes, 2) a high rate of spatial dispersal that is assumed to lead to effective reproduction in non-natal habitat; and 3) averaging or accumulation of occupancy data across multiple sites so that fine-scale patterns of extinction or extirpation would not be detected until they propagate into much broader-scale loss of habitat occupancy.

The sensitivity analysis conducted in the final version of the Assessment (as far as we can tell this is the principal or perhaps only substantive response to the many critical comments made by reviewers) only examines the first of these three issues. While this analysis shows that in terms of the present configuration of the model, outcomes are not strongly determined by the shape of the density-dependent survival function, we infer that this result was dictated by a large effect of the second issue, the dispersal function. The model runs under a default assumption of high dispersal rates from occupied to adjacent reaches (i.e., fish emigrate from natal stream segments to occupy and spawn in others in the system), with apparently an additional assumption that dispersed individuals exhibit no loss of reproductive success. These dispersal assumptions, based as far as we can discern on guesswork unverified by empirical data, result in so much dispersal that local population dynamics at low density are virtually always demographically swamped or overwhelmed by immigrants derived from other reaches of the basin. That is, until the last source population in a basin goes extinct.

Our view is that the sensitivity analysis included in the final Assessment only reveals the overriding importance of this dispersal function in the model's performance. Under different dispersal assumptions, the shape of a density-dependent survival function would quite likely have more substantial effects on modeled outcomes. The conservation biology and salmon population ecology literatures are replete with empirical examples and mechanistic explanations of depensatory survival functions – i.e., where per capita survival or reproductive success declines at low or very low population (e.g., Liermann and Hilborn 2001, Peterman and Gatto 1978, Peterman 1977). The assumption that Oregon coastal coho are immune from such small-population effects still seems highly incongruous with knowledge of salmonid ecosystems and population dynamics and is not clearly supported by empirical evidence, other than the observation – based on crudely averaged observations of population performance – that some degree of recovery has occurred after past stressful events.

Given the overriding importance of this dispersal function to model performance, there needs to be 1) empirical validation that it is modeled realistically, and/or 2) a sensitivity analysis to display its affect on population persistence and recovery under a plausible range of assumed dispersal functions. The behavior of the model strongly suggests that under plausibly low dispersal and disperser success rates, lower than those

used as the default in the Assessment, the specific assumptions about the density-dependent survival function at small population size could be an important determinant of local persistence and potentially of basin-wide recovery and extinction risk. In other words, in its present form the dispersal model swamps all local behavior. Whether or not local extinctions happen and can influence basin-scale coho persistence and recovery is never addressed because the model's assumed dispersal functions seldom allow local extinction to happen. *It is a profound tautology, therefore, for Oregon to construe the performance of this model – structured by assumption to seldom allow extinctions – as evidence that costal coho in the real world are not at risk of extinction or decline.*

2) Problems of Scale of Demographic Units of the Model and the Species

Concerns about the model's possible obfuscation of local population dynamics via unrealistic dispersal and survival functions leads directly to uncertainties about the spatial scale of the aggregate population units considered in the model and whether they accurately match real demographic units of coho salmon. The model's principal spatial unit for determining restoration goals, the Evolutionarily Significant Unit (ESU), is ill-defined and is certainly much larger than any demographic functional unit within the species. From the 1993 petition, pp. 23-24:

> **While the legacy of local adaptation accumulated within local populations cannot be replaced by existing technology, neither has the genetic variation that underlies it been successfully measured and distinguished with existing technology. The failure to detect genetic or molecular differences between populations with current technology does not mean that such differences do not exist; it just as likely means the techniques, tests, and/or sampling designs applied were insufficient or inappropriate. Electrophoresis, for example, has often been unsuccessful in discriminating between coho salmon stocks, even where these populations have been demonstrated experimentally to be ecologically and evolutionarily noninterchangeable (e.g., Oregon coastal hatchery coho v. wild native coho from the same river systems, see Nickelson et al. [1986]).**

Little is known to date about at what scale coho extinction and survival is determined, i.e, what are the effective scales of genetic and demographic identity and coherence for the species. A pattern of patchy and isolated habitat, particularly for crucial winter survival, would suggest the likelihood of highly patchy population structure, with local populations differentiated by, for example, migration behavior that is necessarily fine-tuned to successfully locate winter habitat relative to the spawning and summer-fall rearing habitat location – see analogous examples for sockeye salmon (Brannon 1967, 1972; Brannon et al. 1981; Raleigh 1967) and rainbow trout (Lindsey et al. 1959; Northcote 1981). Similar localized behavioral adaptations are likely essential to contend

successfully with summer thermal stresses that may require precisely timed movements or other fine-tuned behaviors.

While available genetic evidence on coho salmon is insufficient to either confirm or deny the presence of demes, or semi-independent demographic functional units at the scale of small tributaries and stream reaches, some recently-emerging data we have seen referenced may shed new light on this question for coho. Neighboring populations showing starkly different behaviors may show little biochemical evidence of genetic differentiation, using common and standard methods. Far more intensive sampling and genetic analysis for bull trout have revealed a preponderance of genetic and behavioral evidence of demographic structure at a very fine spatial scale – between reaches within river segments, and significant and stable genetic differences among neighboring populations (Kanda et al. 1997; Leary et al. 1993; Spruell et al. 1999; Taylor et al. 1999). Additional evidence, e.g., for bull trout (US Fish and Wildlife Service 2004) and chum salmon (e.g., Tallman & Healey 1994), suggests that while dispersal of adult spawners to non-natal populations occurs, it is most often not accompanied by evident gene flow. The most parsimonious explanation for this is that the fitness or reproductive success of dispersing individuals who emigrate to spawn outside of natal reaches is extremely low (see analogous evidence for kokanee and sockeye in Taylor et al. 1996).

The overriding importance of this question and its context for global survival of a species was highlighted in Frissell 1993 (p. 350), after explicitly mapping the then-known status of coho salmon across their range in the lower 48 US states:

> **Indigenous populations and subspecies can both be considered incipient and potential species (O'Brien & Mayr 1991). In the case of anadromous salmonids, and possibly other migratory genera such as the lampreys, it has long been recognized that homing to natal habitats facilitates the evolution of locally differentiated populations, each subtly but uniquely adapted to its home stream (Rich 1939; Ricker 1972; MacLean & Evans 1981). Around the North Pacific Rim, anthropogenic transfers of anadromous salmonid stocks between river basins have been only rarely successful in establishing new runs, and there are virtually no published cases of such an intervention reinvigorating a depressed or relict population (Ricker 1972; Altukhov & Salmenkova 1990; Steward & Bjornn 1990)... Given that locally adapted stocks cannot be replaced, anthropogenically accelerated rates of population extinction, especially coupled with depleted sources of suitable, locally adapted colonists, could therefore seriously fragment and precipitously jeopardize the viability of an anadromous species across major portions of its range. The risk of collapse or even extinction of such a species may increase nonlinearly as populations are lost and its range fragmented. This would be exacerbated in case of rapid change in global climate, or intensified land use that disturbs habitat widely and frequently.**

The 1993 petition, therefore, explicitly argued that ignorance of local population diversity and its demographic and evolutionary significance in existing regulatory mechanisms and policies was itself a threat to the survival of the species, and that in this view no genetic or demographic evidence supported the imposition of an ESU-level classification for the species within its range in the Lower 48 states. Despite some steps forward that attempt to adopt higher-resolution indicators of local persistence, the current Assessment still suffers from a high potential for obscuring the importance of local processes and population performance, and in our view, the model's predicted basin- and regional-scale outcomes could be grossly wrong as a result. Other than the isolated sensitivity analysis of density-dependent survival function, little attention is given in the Assessment to the importance of these assumptions and the possibility that they obscure, rather than reveal, biological reality.

Careful theoretical examination relative to available literature, empirical validation against known data from real populations, and additional sensitivity analysis of the model are all feasible and necessary, but the record does not show these have been done. Instead the State has chosen to sweep scientific criteria under the rug, rest on preliminary conclusions that seem presently convenient to managers, and beg the rest of us to rely on future monitoring to determine the consequences of such uncertainties, only after they are manifest on the species at risk.

3) Failure to Empirically Validate Key Extinction and Recolonization Assumptions

Empirical data are available to shed light on local extinction and its reversibility, but the Assessment is silent about the use of such information to validate or calibrate the model performance. Historical ODFW coastal spawner suveys, going back to the mid-1950s, can be used in tandem with more recent surveys to assess persistence, recolonization, and patterns of contraction and expansion of occupied habitat within the range of the species. In fact, the 1993 petition presented a very preliminary look at such information, which appears to go unanswered in Oregon's assessment. The 1993 petition (pp. 9-10; Frissell, unpublished analysis of ODFW spawner count data) offered a preliminary examination that revealed evidence of progressive loss of spatial distribution, or occupancy of putatively suitable habitat, over time:

> **"Stratified random" surveys of coho spawner abundance were begun by ODFW in 1990 to determine whether the standard and supplemental survey sites used by harvest managers to assess overall coho abundance in coastal Oregon were truly representative of coastal Oregon coho populations (Jacobs and Cooney 1991; Pearcy et al. 1992)."[sic] The new ODFW surveys are largely consistent with the analysis in Brown, et al., (in press [published 1994]), as are the results: the new data are consistent with a pattern of widespread local extinction. Whereas just 4 of 48 standard and supplemental survey streams (8.3%) showed zero counts in 1991-92,**

zero coho were observed in 52 of 187 random survey streams (27.8%) (ODFW, unpublished data). In the 1990-91 season (Jacobs and Cooney 1991), 81 (50.6%) of 160 random survey streams had zero counts. Since the random surveys were conducted in habitat thought to support coho salmon historically, the data indicate that the standard surveys and models used in coho management (Pearcy et al. 1992) greatly underestimate the extent of vacant habitat. This quite likely reflects a cumulative trend of local population extinctions. More careful analysis of historical surveys should be undertaken to compare current and historic distribution of coho populations in coastal Oregon.

Walters and Cahoon (1985) offered similar evidence of attrition of productive or detectable populations over time from coastal BC, and provided a defensible and uncomplicated protocol for analysis of survey data. The paper provided a lucid discussion of why such a trend of loss of what they aptly referred to as "spatial diversity" indicated erosion of the productive capacity and resilience of salmon species. The authors further point out that even if the pattern is in part attributable to loss of resolution or systematic biases in survey programs, they still should be considered threatening to the health of the species at stake – a lesson which, despite some significant reforms in recent years, still bears repeating judging by assumptions made unchecked in Oregon's Coho Assessment.

Brown et al. (1994) performed a similar investigation using salmon survey data in California, and their analysis, like Walters and Cahoon's (1985) look at BC salmon and Frissell's preliminary look at Oregon coastal coho data, showed a clear pattern of local extinction within the range of coho in California. There is no evident biological or environmental reason why such a pattern manifest among salmon both north and south of Oregon would not also occur in Oregon. Hence, we are puzzled that the Assessment does not even hint that such an analysis has been made for Oregon (the spatial coverage and dispersion of the field data for Oregon, both in the historical and the recent data sets, are probably far better than the data available for the BC or California studies). Direct empirical examination of these data – for specific spawning segments of rivers and streams, NOT aggregated – would refute the core assumption of the Assessment model that local extinction is either a rare event or is so rapidly reversed through recolonization that it functionally does not occur at all under prevailing conditions. The field survey data offer a large data set to directly test two hypotheses: 1) that local populations do not go extinct (reaches with coho present do not decline to 0 counts); and 2) that locally vacant habitat patches are rapidly recolonized via dispersal (reaches that start a period of years with 0 counts end it with >0 counts). Presumably there has been some recovery seen since the run of severe ocean survival years in the 1990s, but was such recovery manifest in a reappearance of populations that were entirely lost during the poor years, or was it based on rebound of that set of populations that did not quite diminish to the vanishing point? Where is the evidence that rules out the possibility that each such episode of poor survival years leads to spatial attrition of the species, such that in aggregate, rebound may occur, but it occurs based on fewer and fewer populations? This is exactly the scenario Walters and

Cahoon (1985) cite as indicating profound erosion of resilience and, ultimately, of productive capacity and persistence of a salmon species.

4) Unexamined Assumptions about Future Environments

We are seriously concerned that the Assessment is underpinned by an unexamined assumption that conditions will never get any worst than those that prevailed during the most recent "poor ocean years." It is an absolutely crucial premise of the Assessment's conclusions that the recent past serves as an adequate model for all future environmental variation that will tax coho survival and recovery. Where is the evidence that the adverse ocean conditions experienced by coho in the 1990s are worse than those that prevailed during previous periods of climate and marine stress? Where is the careful description of exactly what conjunction of events occurred in the 1990s to cause severe declines?

Moreover, the Assessment gives no consideration to the likely influence of climate warming on both marine and freshwater conditions. Recent scientific reports and reviews (e.g., Harley et al. 2006) point to strong linkage between ocean conditions and global temperature, and among the predicted relationships is increasing intensity, duration, and possibly frequency of El Nino events with increasing global temperature. Large and rapid biological and physical changes in oceans can be expected (Harley et al. 2006), and many of these changes are highly likely to be hostile to Pacific coast salmon. Freshwater conditions may also be increasingly taxing, with increased climate variability signaling increased duration of high temperatures and drought and increased frequency and magnitude of fall, winter, and spring storms (e.g., Rapp 2004, many others).

Oceanic 'dead zones' pose a relatively recent and unprecedented concern for coastal fisheries off central Oregon, including coho salmon. A hypoxic zone of water first appeared off central Oregon in 2002. This was the first 'dead zone' to be recorded off the Oregon coast and it has reappeared as a larger zone of hypoxic waters in each successive year. According to researchers at Oregon State University, the 2006 'dead zone' was the largest and longest lasting event recorded off the central Oregon coast (Oregon State University 2006). The 2006 event started in mid-June in the Heceta Bank near Florence and lasted until late October and impacted an area "the size of Rhode Island." Scientists at OSU report that changes in oceanic and atmospheric conditions leading to stronger and more persistent northerly winds, which contribute to the hypoxic conditions, are consistent with global warming and may signal a break down in the more typical upwelling events that bring cold, nutrient rich waters to Oregon coastal areas. If this phenomenon continues to expand and affects larger areas for longer time periods, it is likely to detrimentally impact coho salmon through changes in food availability and abundance, available migratory pathways, and nearshore habitat suitability. Such changes are novel for Oregon coastal coho and are not adequately addressed in the State of Oregon Conservation Plan for the Oregon Coast Coho ESU.

It remains largely a matter of speculation how climate change might interact with now-extensive land use alterations of ecosystems (by grazing, agriculture, logging, roads, and local urbanization), but there are a myriad of reasons to accept that these alterations affect the natural resilience of watersheds, rivers, and estuaries in ways that will likely increase their vulnerability to adverse climate change. Moreover, if Oregon coho have grown increasing fragmented in distribution as has been established for California coho (Brown et al. 1994), then increasingly isolated populations are at ever-greater risk of going extinct in the face of growing environmental stress.

By overlooking all of these concerns, the Assessment fails to identify and account for the key mechanisms of biological and physical resilience that will determine whether the coho salmon effectively adapts to and survives in the face of inevitable environmental stresses. If such an accounting were accurately made, it might indicate that Oregon coastal coho will need more high-quality habitat than is available to them in order to get through future bad episodes. Under even moderately stressful circumstances, robust populations in high-quality habitat are sometimes extinguished by natural or human-exacerbated catastrophe (e.g., a landslide dam creating a large and persistent barrier to spawning migration). The present model does not apparently account for such catastrophes, and in fact assumes they are not important enough to be modeled (although including catastrophe is a routine element of conservation assessment, and it has been shown in many cases that the failure to account for its affect on population ecology can seriously bias such assessments (Mace & Lande 1991; Propst et al. 1992)).

5) Freshwater Habitat Assessment is Critical, but Neglected

Oregon's Assessment appears to bypass the principal lesson that application of the Nickelson-Lawson model repeatedly teaches: *freshwater habitat is critical.* Since the lucid warning of Lawson (1993), it has been well–recognized by scientists working with adaptations of the Nickelson-Lawson life cycle model for Oregon coastal coho that despite the masking effect of marine variations in survival over time, the quality, spatial extent, and distribution of freshwater habitat place ultimate limits on productivity and recovery. Oosterhout et al. (2005) investigated the potential role of supplementation of wild populations with hatchery fish with an adaptation of the Nickelson-Lawson model, and concluded that hatchery actions were largely fruitless because compensatory survival mechanisms appear to afford wild coho the capacity to expand quickly to exploit the limits of available freshwater habitat. While it is important to note that Oosterhout et al.'s (2005) conclusion was based on the same uncertainties about dispersal and survival at very small population size as noted above for the Oregon Assessment, the paper's ultimate conclusion about freshwater habitat limitation appears to be justified under all reasonable model conditions. Instead of taking this lesson and using it to carefully evaluate the current condition of coho habitat and prescribe appropriate habitat management actions, the Assessment and Oregon Plan simply make assumptions that 1) practices have changed, therefore 2) freshwater habitat is not being harmed as severely as it once was, therefore 3) habitat must be getting better all the time.

The latter two assumptions in particular remain unexamined and largely undocumented in the Assessment and Oregon Plan.

A simple change in practices does not ensure that freshwater habitat is improving. There are several basic and well-recognized biophysical reasons for this, all as far as we can tell, completely unexamined in the Assessment. First, past practices have created impacts that lag in their full expression in streams. Roads, for example, constructed 50 years ago remain vulnerable to erosion and landslides half a century later, and some may increase in their impact, e.g., because of decaying organic material embedded in road fills (Swanson and Dyrness 1975. Sidle and Ochiai 2006). The loss of large trees by logging in riparian zones affects the recruitment and retention of large wood in streams over many decades to a century. Hence many coastal streams are just now entering the period when the impacts of distant past riparian logging are being maximally expressed, as residual pre-logging debris is naturally decaying and disappearing. Coarse woody debris conditions today are worse than they were 20-70 years ago, when harmful riparian logging was originally conducted. A second category of explanation is that the persistent effects of past habitat disturbance often reduce resilience to future disturbance. Hence even very small impacts today may have disproportionately large biological effects. One simple but pervasive example: that depletion of coarse wood in streams and loss of large trees from stream banks and floodplains reduces the resilience of streams to sediment inputs. The capacity for physical storage and sorting of fine sediment is greatly reduced, and even rather small injections of fine sediment may now elevate suspended sediment levels and harm the quality of spawning gravels for very long distances from the source. Hence, habitat quality may remain impaired or even worsen even under a reduced incidence of human disturbance. There are also biological aspects of reduced resilience and increased vulnerability. Coho salmon, for example, inhabit less freshwater habitat area than they formerly did, and populations are more fragmented than they were early in the previous century when they experienced the first round of large effects from human development. Today, even locally restricted damage to habitat can impact the last remaining productive population in a basin.

It is also unclear whether harm is on balance reduced when the cumulative spatial extent and timing of habitat-disturbing management practices are not accounted for. While the per-acre impact of forestry operations may be reduced, for example, an increase in the number of acres disturbed may cumulatively offset or negate any benefit from improved practices. For some land uses, it remains poorly documented what if any freshwater habitat improvement has resulted from changes in practice. Has the general decline of grazing in the Oregon Coast Range actually led to improvement in freshwater habitat, for example? Or is remaining grazing concentrated in locations and with methods that still remain just as harmful to coho salmon? Beyond that, land use transitions have not been considered. Much valley bottom and floodplain land formerly used for grazing is being converted to residential and commercial uses. Does that transition improve or further harm coho habitat? These examples point to why the kind of information developed by the CLAMS project and similar efforts can be very important. Recent literature provides the necessary information on historical landscape

patter (e.g., Ripple 1994), changes in land use and landscape pattern under recent and future scenarios of human activity (e.g., Thompson et al. 2006), the spatial distribution of potential historical and future coho habitat associated with these landscape patterns (e g., Burnett et al. PNW "High Intrinsic Potential" habitat modeling), and a spatially explicit analytic framework to examine linkages between landscape management and fish habitat (Spies et al., in press). Decades of research has shown that the fate of coastal salmon habitat, and hence the salmon themselves, is vitally affected by the pattern of human and natural disturbance and recovery of habitat (e.g., Reeves et al. 1995), yet these questions remain strangely unasked and unanswered in the Assessment and Oregon Plan. Addressing them is a fundamental step necessary to ensuring the success of any conservation plan for coho salmon. It is entirely insufficient, and in our view, indicative of seriously misplaced priorities, to defer such analysis to some future planning process, because the answers and uncertainties that only this analysis can illuminate are vital to the persistence and recovery of coastal coho salmon.

To augment this concern about the failure to account for landscape management and its effects on present and future coho habitat, Oregon's complacency about the adequacy of existing land management practices is not scientifically justified. For example, the Assessment and Oregon plan ignore recently-published papers that provide detail and increased certainty about long-debated downstream impacts of logging riparian zones in headwater stream channels (above the fish-zone). Allen & Dietrich (2005), for example, found that present forest practice rules for low-order channels in California are clearly insufficient to protect downstream fish-bearing waters from harmful summer temperature increases, and there is every reason to believe the same physics apply to Oregon streams and forest practices. Rashin et al. (2006) document extensive and biologically harmful sediment delivery to stream networks during and after clear-cut or partial-cut logging of headwater streams under Washington Forest Practice rules (comparable to or more conservative than Oregon's current practices). Sharma and Hilborn (2001) showed that variation in coho salmon density in Washington streams was negatively correlated with road density, among other habitat-related covariates. Why has a similar analysis not been conducted in Oregon? While there may be scattered site-specific activity occurring that is locally beneficial, Oregon has only a very limited regulatory program in place to reduce the impacts of roads on private forest land where road densities are very high, with no regulatory handle on abandoned or "legacy" (pre-Forest Practices Act) roads, and no coherent strategic framework to reduce the impact on water quality of roads on agricultural or residential lands within the range of the Oregon coho. Finally, recent research by Wigington et al. (2006) demonstrates the use of many small streams with ephemeral or intermittent flow by coho salmon during portions of their life history. The application of stream protection rules continues to neglect the importance of these stream types.

The factors identified above offer just a few examples of consequences of land use activity influences on headwater streams and watershed conditions. They are examples that scientists have long brought to the attention of managers, but managers have remained unwilling to respond to with appropriate and well-recognized protective practices. Oregon does have access to the knowledge necessary to craft policies to avoid

such harms – Oregon (like many other jurisdictions) simply has been politically unwilling to do so.

Meanwhile. The current Administration in Washington DC appears intent on rolling back protections for Oregon coho habitat on federal lands under the Northwest Forest Plan. Reeves et al. (2006) showed that watershed conditions improved in a majority (64%) of watersheds within the Northwest Forest Plan in just 10 years of the plan implementation. Protection of smaller stream systems was a critical component of the ACS. However, the US Forest Service revised the language of the Northwest Forest Plan Aquatic Conservation Strategy in a way that substantially weakens the protection it affords from harm to locally important habitat and from the cumulative impact of multiple such harms. Now the BLM is in the process of revising their land use plans for all of the public lands in western Oregon, and the current draft EIS analyzes 4 alternatives, 2 of which would "apply new criteria for designating the width of riparian management areas" and would likely result in much less riparian zone protection than in current BLM plans pursuant to the Northwest Forest Plan (BLM publishes the "Western Oregon Plan Revision News, October 2006 edition, Newsletter No. 6). Protection for the kind of streams that Wigington et al. (2006) flag as important for coho survival and production would appear to be greatly diminished under 3 of the 4 alternatives being considered by the BLM (save for the No Action Alternative that would retain existing management direction). Given these federal policy directions, it is increasingly clear that federal lands cannot be counted on to provide the kind of restoration of coho salmon habitat they have been providing in the recent past.

6) Monitoring and Adaptive Management: Can it Pick Up the Pieces?

We do not take comfort in the Assessment and Oregon Plan's deferral of key ecological uncertainties to future monitoring and anticipated "adaptive management." While it is foolish to oppose "adaptive management" in a general sense, it is wise to question it in specific applications. The first question to be asked is whether available scientific knowledge has been adequately evaluated and carefully and cogently summarized, in order that uncertainties and the adaptive management protocols necessary to address them will be as specifically defined as possible. In this Plan, it seems to us that future monitoring and anticipated adaptive management are not serving their proper role of a focused means of reducing key uncertainties so that serious mistakes and harm might be avoided. In fact, it is rather apparent here that monitoring and adaptive management are serving the opposite function: they are intended as a general tonic to absolve today's Oregon Plan managers of the need to do their homework and take a hard look at available science and its implications, disclose to the public what the risks might be, and develop pro-active conservation initiatives that stand a better chance of reducing harm and hastening recovery. "Adaptive management" in the context of this plan boils down to: "We know we haven't explained a lot of important things, but look at this complicated model we developed. Just believe the model and trust us....we'll let you know if the fish eventually tell us we've messed up."

There are many reasons why this paradigm is ineffective for biological conservation. It is in fact identical with the age-old Oregon coho management paradigm that got us to where we are today. There is some basic science that bears on the core biological monitoring assumption here: as published power analyses of salmonid spawner or redd count data show (Dunham et al. 2001; Maxell 1999; Rieman & Mcintyre 1996; Rieman & Myers 1997), the capacity of even the best field surveys to detect population trends is very limited. Under the best of circumstances, it might take 15 years before an underlying, real biological trend can be substantiated – simply because the interannual variance of spawner count data is moderately high. The problematic variance is probably higher for coho salmon because of their less-diverse age at maturity and sensitivity to fluctuating ocean conditions. This means Oregon coast coho might experience at least 15 years of irreversible harm and progressive erosion of habitat, population diversity and productive capacity before Oregon managers would be able to substantiate that a problem existed. It remains a mystery to us why the appropriate power analyses were apparently not done, or are not offered to evaluate the utility and limits for decisionmaking of coho return data.

What would be needed to render adaptive management effective for coho recovery? First, a critical assessment of status that accounts for uncertainties and spatial distribution and diversity concerns using available information. Second, a "default" management and conservation plan that makes conservative assumptions and avoids placing the species, its key populations, and its habitat at risk of irreversible harm or progressive loss. Third, a monitoring, research, and adaptive management protocol that identifies those specific scientific unknowns for which the answers matter most to coho status and recovery, identifies which of those can be answered through empirical means, and puts in place the studies and reporting systems necessary to answer them. Examples might include surveys to establish that recolonization of (not just first-generation dispersal into) depopulated habitat does in fact occur. Fourth and last, a "safety net" monitoring protocol that keeps tabs on coho survival, spatial distribution, key elements of habitat condition, and "leading indicators" of patterns in land use, climate, natural disturbance such as wildfire, and other factors deemed to be important in dictating the future of Oregon coastal coho salmon. One other element of the Plan that Oregon might point to as a "safety net" for the concerns we have stated is the stated numerical goal in the Plan, Appendix 2:

> **This conservation plan calls for a doubling of the average abundance observed during 1993-1999 scaled to future ocean survival rates. In other words, achieving desired status would require an average escapement of 101,000 spawners during years with marine survival similar to the 1993-99 return years.**

Much more could be said about the quantitative goals explained in Appendix 2 than we have time or space for here, but it appears to us they have received little in the way of external review or critical scrutiny. The derivation, justification, and definition of these goals remain in many respects very unclear. However, for the moment we

would offer that a simple doubling of the abundance of a presently-severely-diminished population does relatively little to improve its prospects for long-term survival. Long-term survival, or viability, is determined in part by population size and distribution relative to temporal variability. Relative to prevailing variability imposed by fluctuating climate, ocean conditions, and density-independent freshwater survival, a simple doubling of average returns would likely have only a fractionally tiny, incremental effect on viability. Only by 1) reducing variability in survival or 2) greatly increasing abundance and distribution – e.g., by manifold – can the viability of Oregon coho significantly be increased. Unfortunately, the present goal seems almost calculated to avoid either of these effective outcomes.

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November 30, 2006

To: The Oregon Department of Fish and Wildlife

Re: The Conservation Plan for the Oregon Coast
Coho Evolutionary Significant Unit. October 6, 2006

1. The Plan further reduces coho smolt production on the Oregon Coast from 762,500 to 260,000. Table ODFW-1 and related supportive discussion language is not contained in the Public Draft, October 6, 2006.

2. Coastal stakeholders charged with "delivery systems" responsibilities were not sufficiently represented.

3. Voluntary v. regulatory concerns remain, especially in the estuary and lower stream system areas.

Fish

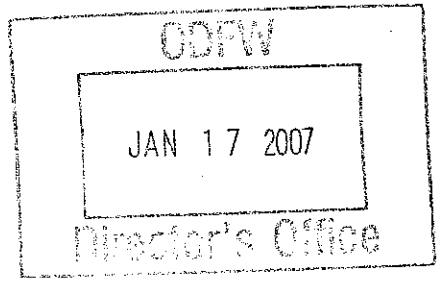
FAX COVER SHEET

To: ODFW Director Virgil Moore **Date:** January 11, 2007

Re: "State of Oregon Conservation Plan for the Oregon Coast Coho Evolutionary Significant Unit:

Total number of pages including cover: 4

From: Jim Ball
3557 NE Surf Dr.
Lincoln City, Oregon 97367



Director's Office
Oregon Department of Fish and Wildlife
3406 Cherry Ave. N.E.
Salem, Oregon 97303

ODFW Commission
Reference to "State of Oregon Conservation Plan for the Oregon Coast Coho Evolutionary Significant Unit"

Dear Sir:
I had planned to attend the Commission meeting scheduled for January 11, 2007. But due to the Winter storm I was unable to get there. I would like to submit a copy of the testimony I had planned to give.

TESTIMONY FOR CONSERVATION PLAN:

My name is Jim Ball. I'm an indirect transplant to Lincoln City from Idaho. Because I do not own a boat, bank fishing is very important to me. I fish for food for the table, not for sport.

I have three points to be considered by the commission with respect to the plan.

FIRST POINT:
The Magnuson act of 1976 was intended to stop ocean fish depletion by Foreign vessels within 200 miles of the U.S. coast. But it also created a highly sophisticated U.S. fishing fleet, who has continued to over fish the ocean. In 1980 low interest loans were given to anyone interested in commercial fishing. Because of a large influx of commercial fishing, returning spawners took a nose dive in the 1983 to 1986 era.

If you do not believe commercial fishing is taking a large toll of fish, look at the results of just one river. Due to the restricted commercial fishing last summer along the West Coast the Salmon River had almost twice as many returning Coho salmon as normal. These results indicate Salmon River Coho are an important fish.

Let's look at the Salmon River and its history. The Salmon river is a small coastal stream. Yet it has one of the highest rates of bank fishing per mile of stream in the State. Hense it draws bank fishermen from all over.

Three years ago I met a man from Sweden bank fishing the "Glass House" hole. It is common to see fishermen from California, Washington, Montana, Idaho, and all over Oregon on this small stream. Those people bring in dollars to the area in the form of fishing licenses, sporting good sales, food and lodging. But Coho fishing on the river only lasts for a month and a half.

Now we are looking at a plan to stop the hatchery Coho program on the Salmon River. This is very similar to the program that stopped the hatchery steelhead on the Salmon River in 1994. Let's look at the benefits it produced. That program ran for 30 years with an average catch of approximately 1685 fish per year, or an average rate of 5.6% catch/released fish. During their run you would see a hundred plus fishermen per day on the River. There were seven Sporting Goods supply stores in the area. Today you will see one or two steelhead fishermen per week. What a loss to the area. How many fishing licenses did Oregon loose? Today there are two stores supplying sporting goods in the area. Again what a loss.

SECOND POINT:
My second belief for spawner loss is the abundance of seals long the coast. In the 1980's at the mouth of the Siletz River there was a resident colony of 5 or 6 seals. Today that colony has grown to over 200. Each seal kills more fish in a year that 90% of all the Siletz fisherman catch, and this is not the only seal colony around.

Three years ago I went with a friend in a boat out of the Salmon River into the ocean in search of Salmon. He turned north to check our "Harts Cove". "Harts Cove" was formed by a basalt slide. It has rocks from Volkswagen size up to tractor trailer size covering the shore. Upon each and every rock was a group of seals. There were so many seals that if a seal wanted to get out of the water he had to push another seal off the rocks into the water. We are not talking about hundreds but thousands of seals. I do not known if they were resident or migratory. I do know we could not mark a single fish on the fish finder between the coast and 3 miles out. I've not been out there since then. Something needs to be done to correct this abundance. You can not protect both fish and seals and expect fish to survive.

THIRD POINT:
The third reason for declining spawners is we have people making decisions who are anti-hatchery advocates. Do not forget hatchery Coho and hatchery steelhead are the only ones we can keep for our tables.

After the hatchery fish are gone all you will have is a few sport fishermen. Is the Oregon Fish Department so flush with money that they can afford to loose more revenue from lost fishing licenses.

As I have said at the beginning I do not own a boat, so bank fishing is important to me. Each year I try to take a young person fishing. Most parents do not want their child out in a boat, but do not object to bank fishing if it is close by. The Salmon River fills this need. Do not take hatchery Coho from the Salmon River and kill local fishing opportunity as was done with hatchery steelhead. Instead develop a program to bring hatchery steelhead back to the Salmon River.

Thank you for your consideration.

Jim Ball

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