Appendix 1 Attachment I
Comments on the 1st Draft Coho Conservation Plan

Mark McCollister's Comments on the 1st Draft:

RE: Oregon Trout's comments regarding ODFW's draft Oregon Coast Coho Conservation Plan

Dear Kevin:

Oregon Trout appreciates the opportunity to comment on ODFW's draft Oregon Coast Coho Conservation Plan. Generally we are supportive of the state's desired status but believe the plan lacks the rigor and assurances necessary to achieve it. Given the substantive gaps in the current draft, the following comments are intended to identify the type and specificity of information that should be included in the conservation plan.

Measurable Habitat Criteria

Develop and include habitat metrics for each independent and dependent population. Describe current habitat condition (quantity and quality, measured relative to desired condition) and how much (quantity and quality) habitat is necessary to get to desired status. For example the Nehalem currently has xx acres of high quality over-wintering habitat for juvenile coho. For the Nehalem population to reach its abundance target/desired status, xx acres of high quality over-wintering lowland habitat is needed. Define desired future conditions in riparian areas and in large wood delivery areas as mature forest conditions (as opposed to basal area requirements) and define recommended riparian buffers across land types, including low lands/agricultural areas. Riparian buffers should include islands and 100-year floodplains and should be set at 150-200' for perennial streams in priority areas. Set habitat goal of no net loss in quality habitat.

Use watershed assessments—and conduct and collect additional requisite data—to determine watershed/ ecosystem health. Determine relevant measurable criteria (indicators of the watersheds ability to support coho populations at desired status) from watershed assessments such as lwd density, road density, temperature, riparian health measures, amount/quality of high intrinsic potential lowland habitat. Set goal as improving watershed conditions. Also restoration actions must focus on recovering long-term ecological/ habitat forming processes. Though we appreciate the attention the plan gives to placing large wood in stream, these actions must be coupled with actions that will allow natural, long term wood recruitment from riparian areas, debris torrent fans, debris torrent tracks, and steep and unstable slopes. Further, the plan / strategy should advance and ensure the normalization of natural lwd movement through stream systems. Restoration actions should address the causal agents for the lack of large wood and natural movement.

Prioritize areas for restoration

Focus on where fish are now. Protect and restore habitat creating processes in these areas first. Look at CLAMS to identify likely large wood delivery areas and lowland over-wintering habitat

that are in proximity to these current fish strongholds. Once these areas are secure, expand efforts to adjacent areas.

Develop strategies to keep large wood in riparian area, stream channel, and estuary.

Have the goal of this strategy be to emulate the natural movement of wood through a stream system. There are currently requirements on forestlands that prohibit the removal of downed wood but no such guidance off forestlands. There is less incentive for a landowner to encourage natural wood recruitment into the stream channel when it will be removed from the channel downstream. We recognize that not every streamside area or place will be appropriate for allowing large wood to accumulate, but the plan must do more to proactively advance the persistence and movement of large wood instream than the status quo. Where areas would be inappropriate for large wood accumulation or movement, describe in plan where and why large wood is removed form the stream channel once its ends up there. Consider the establishment of off-forest areas where wood removal is prohibited or permitted. Streams and estuaries will not achieve desired complexity if wood is removed.

Beavers

We appreciate the recognition of the importance of beaver in creating coho habitat, however we are unconvinced that the identified actions will produce the desired response: a significant increase in coho habitat. Establish beaver population targets by watershed, based on historic population data versus the amount of beaver-related habitat currently necessary to attain the future desired status of coho. In beaver emphasis areas, as currently proposed in the plan, consider requiring a permit/consultation with ODFW prior to the removal of nuisance beaver and prohibiting trapping for fur in emphasis areas until beaver populations reach targets. Consider removing the beaver from the list of "nuisance" animals under Oregon law so as to better ensure the ability of this animal to function as an important habitat creation agent.

Funding

Include discussion regarding Measure 66 and impacts to restoration planning and project if the measure is not renewed in 2013. This is a possible future foreseeable action with real implications, and the plan should address it. Identify other potential revenue streams.

Thank you for the consideration of these comments.

Mark McCollister
Oregon Trout
June 15, 2006

To Kevin Goodson, ODFW

Preliminary comments on initial draft of ODFW's Oregon Coast Coho Conservation Plan (5/19/06)

1. As mentioned at the last meeting, I believe the second and third paragraphs of the introduction appear to greatly overstate the importance of private land in the plan.

2. As mentioned at the last meeting, I suggest using "watersheds" instead of "landscape" throughout the document.

3. Regarding extinction, endangerment and threatened classifications (page 4), should consideration be given to the potential for beefing up the populations in the ESU through introduction of coho from areas outside the ESU?

4. Is there sufficient proof to support the assumption that reduction of hatchery releases increased natural production? How about changes in ocean conditions, harvesting controls, predators, and improved stream conditions? Doesn't reduction in hatchery fish impair opportunities for much needed fishing? Isn't it premature and risky to virtually shut down hatcheries based on assumptions?

5. Some of the chapters on various agencies activities relating to coho, such as ODFW (beginning on page 55) are over-broad, generalized approaches, rather than directly responsive to specific "limiting factors" not yet drafted (to facilitate identifying gaps that need to be dealt with). I would like to reserve my comments until the limiting factors are addressed.

Sincerely,

Bill Moshofsky
Co-chair, Save the Salmon Coalition

Oregon Anglers comments on the Oregon Coast Coho Conservation Plan 06/15/'06

The only significant editorial comments I have relates to the over-riding tone of past hatchery practices influencing the future of sport fishing and the economic welfare of the coastal communities. The future lies with the Oregon Hatchery research center resolving the conflicts between naturally producing salmonids and their hatchery raised brothers. I am sure the citizens of Oregon and their elected legislators would not look favorably on us if we were writing off any changes in the status of the hatchery product and still continue to spend millions of tax payer dollars.

On page 32, in the first sentence under "Strategic Direction" should read: *"… that hatchery fish have minimal negative impacts on the productivity of naturally produced coho populations…"*

On page 33, first full paragraph: "*ODFW will continue hatchery management actions described in the Oregon Plan for Salmon and Watersheds in 1997with coho releases at the current level of about 760,000 smolts until research resolves conflicts between wild and hatchery coho.*

As for the reduction in coho in the second paragraph in the Salmon River, if the coho are straying at such a high rate but not adding to returns, why are we not converting to native broodstock? Perhaps because the wild coho are not doing any better? I propose a sunset on the elimination of the hatchery coho of 4 generations. This should tell us if the wild stock is viable. If they are not, then let's not waste a very popular fishery for the Salem/ mid-coast area.

In the third paragraph on that page I propose it should read: *"Hatchery coho programs targeted at research, education, or conservation will be planned to minimize negative impacts on natural production. The Oregon Hatchery Research Center will play a major role in researching hatchery/native coho interactions and will prioritize research activities designed to provide information needed to support the overall goals of the Conservation Plan and ODFW."*

Page 34, comments:

Ecological risks

*Disease transmission- Most diseases in the hatchery setting come from wild fish that are above the water intake for the hatcheries. Diseased fish in the hatchery setting are treated, and if the treatment is not successful, are destroyed. They go out from the hatchery healthier than the general population of wild smolts. Once released, both wild and captive are exposed to the same pathogens. There are no scientific studies that accurately compare the comparative health of either in the wild.

*Exceeding habitat carrying capacity- This theory has no scientific backing. Two recent studies by Achord, Levin, and Zabel of NOAA, and Robert Bilby demonstrate that carrying capacity is much higher than currently being calculated,

as much as than 10 times more. Bilby found "excess" spawners actually changing the stream bed and creating their own gravel beds. The key was the fertility of the stream. The more dying adults there are in a stream, the higher the survival of geometrically increased numbers of young.

Genetic Risks

*Artificial selection and domestication of hatchery stocks- Genetics can be altered by selectively breeding coho in a hatchery setting. However, domestication has been proven to change behavior, but not genetics. There is no know mutagen that changes a coho's genetics by merely keeping them safely in custody for the first year of their life.

Management Risks

*Replacing natural habitat with hatcheries- Hatcheries don't "replace", they mitigate for past management mistakes.

*Mitigation with hatcheries as part of the justification for blocking, altering, or destroying natural habitats- This is the ghost of management past. We have mitigation hatcheries to make up for harm done by previous management that is impossible or very difficult to correct because of population increases, etc. This is emotional history, and should be eliminated!

Dennis Richey, Oregon Anglers

Wayne Hoffman's comments on Partial draft conservation plan – 6-16-06:

1. P. 2: Introduction. Goal (in italics) Add to the text presented: "Most potential habitat in freshwater is occupied by Coho most years, and most habitat with high intrinsic potential is substantially productive of Coho most of the time."

2. Desired Status Goal (in italics) - [first page of revised text without pagination] Add: "Most potential habitat in freshwater will be occupied by Coho most years, and most habitat with high intrinsic potential is substantially productive of Coho most of the time. Healthy populations and subpopulations will be the norm, and will be broadly distributed through the ESU. The currently recognized variation in Coho life histories will be maintained in at least its current distribution, and distribution augmented where feasible."

3. Criterion 1. Population status: [revised text without pagination] This is fine, provided the persistence and sustainability criteria are adequate.

4. Criterion 2 - Adult Abundance. [revised text without pagination] The text here is not clear on how you do multi-year running averages stratified by ocean conditions. At the June 26 stakeholders meeting it was explained that the annual abundance estimates would be normalized to ocean conditions, then averaged. The text needs to be clarified to make this process clearer.

An additional statistical issue remains: presumably this analysis will be done population-by-population for the independent populations. Will the metric for success be that all the running averages stay above the target levels at all times?

5. Criterion 2 - Adult Abundance. [revised text without pagination] The revised Table 3 is much more appropriate than the one in the earlier draft, particularly because it is just based on the high-quality habitat. However, the contributions of lower-quality habitat need to be factored in as well, or at least a mechanism for adding them needs to be described in the plan.

6. Criterion 2 - Adult Abundance. [revised text without pagination] In the development and review of the Assessment and in the earlier phases of development of this Conservation Plan, the Stakeholder Team and working groups have offered substantive comment and suggestions for improvement of modeling efforts. So, it is kind of dismaying to see Table 3, referenced as produced by a model identified only as "ODFW's Habitat Limiting Factors Model." Model structure and documentation need to be made available to the Stakeholders, either as part of the report, as an appendix, or as a separate, referenced document.

7. Criterion 3 - Productivity: [revised text without pagination]. A metric that can take 12 years to evaluate does not give us adequate response time to respond to productivity problems when they appear. More work needs to be done on developing metrics powerful

enough that they that can be evaluated in a more timely way. One approach might be to add a component into the metric for cause of failure, to be evaluated for each year of failure, with some causes ranked as of more concern than others (high concern value for "unknown", "excess harvest," perhaps lower level of concern for "100-year flood"). Another way to add power might be to incorporate the degree of deviation from the threshold in the metric.

8. Criterion 4. Persistence. [revised text without pagination]. This is probably as good as we can do at this time, but the plan should incorporate a commitment to examine and incorporate results of newer, more powerful models as they become available.

9. Criterion 5. Within Population Distribution. [revised text without pagination] The metric and threshold are perhaps as good as can be supported by spatially randomized spawning surveys, but are inadequate to really detect changes in within-population distribution on the scales necessary for detecting loss of occupancy in time to respond effectively. This metric and threshold will not allow unequivocal detection of a problem until it has progressed to the point that diversity and viability may be threatened. Fortunately, alternate methodology is available that could provide better surveillance of within-population distribution at less cost than the spawning surveys currently used.

The MCWC has been contracting for summer snorkel surveys of coho habitat for several years. We use these surveys for a variety of purposes related to assessment of opportunities for habitat enhancement. Based on this experience, I am confident I could design a snorkel-based assessment of summer occupancy that would allow occupancy mapping at the 7th field or finer scale for the whole ESU in a single year at a cost in the neighborhood of $100,000, perhaps less. This estimate is based on a greatly scaled-down protocol from what we use. It also is based on our experiences contracting snorkel surveys. I cannot estimate the costs of the program if ODFW choose to conduct it with their own staff, but it should not be too different.

This assessment would also give far better information on occupancy and status in dependent populations than are achievable with randomly-selected spawning surveys, because the small sizes of these basins reduce the frequency of spawning surveys below the thresholds of statistically valid samples.

Alternatively, a more extensive summer snorkel survey program could be developed that would provide detailed information for evaluating more of the Measurable Criteria. Criterion 2, Adult Abundance, could be augmented (or even replaced) with a summer juvenile abundance that would provide better spatial definition. As another example, the productivity criterion could be greatly augmented with information on juvenile stocking rates from snorkel surveys. Having some information on survival egg to summer parr could be very useful in interpreting difficulties in meeting productivity criteria. Such a more extensive program would obviously cost more, but would remain cost-effective compared to other monitoring approaches, given the quality of the data obtainable.

10. Criterion 6 - Diversity. Pp. 13-14. This approach equates diversity with genetic diversity, and uses population genetic theory to provide minimum population sizes to avoid reduction in genetic diversity through non-selective processes (e.g., genetic drift, founder effects). Avoiding such non-selective loss in diversity is important, and this Metric and threshold are probably appropriate.

However, these non-selective risks are not the only risks to diversity. Selective loss in diversity may be a larger risk, and needs to be addressed as well. Selective loss of diversity can occur when the habitat needs of particular phenotypes are compromised, or eliminated. In fact, the one historical reduction of diversity documented in the Coho Assessment was selective, and may well have occurred without populations falling below the thresholds of harmonic means remaining above 1200. This example is the loss of summer lake rearing in the lakes populations. It occurred because of compromise of the lake habitat (through the introduction of predatory fish), not through the mechanisms the metric and threshold are designed to monitor.

A good low-tech approach is available to supplement this criterion with metrics designed to assess selective threats to diversity. This is simply to prepare a catalog of known phenotypic diversity, particularly in life history patterns, and to stratify the existing monitoring programs to assess trends in frequency of these. I presented staff with a draft catalog of known diversity which can be a good starting point. A copy is attached. Next steps would be to distribute this catalog to the district biologists and other staff and knowledgeable people for concurrence and additions, and then to develop metrics for detecting trends. Much of my draft catalog is of alternate patterns of habitat use by juveniles (lake rearing, estuarine marsh rearing, etc.) Metrics for these would need some directed surveys of the appropriate habitats. Because several of these are currently found in only a few locations, the effort needed should not be overwhelming.

Maintaining or augmenting life history diversity is critical to achieving significant improvements in overall productivity, population numbers, and resilience. Consider that the larger lake systems have tended to maintain "viable" populations through bad ocean conditions, but have experienced 80%+ reductions in overall adult population levels with the loss of the summer lake-rearing phenotype.

11. Other Criteria needed: Pp. 3-14. We need to ask whether these 6 criteria are adequate. The most glaring omission is the lack of criteria related to trends in habitat abundance, quality, and availability (connectivity). The decision to leave this out of the assessment is perhaps defensible given that the assessment is basically a snapshot, but for a conservation plan with a significant life span habitat criteria are necessary. The stakeholders, or a smaller working group should work with staff to develop measurable criteria, metrics, and thresholds. ODFW has been working for years on Aquatic Habitat Inventories in OC Coho habitat. Surely these data are adequate to set baselines for some forward-looking metrics?

One metric could be loss/gain in habitat from formation/removal of manmade barriers. A pass could be defined by a decrease in mileage of potentially suitable habitat isolated by barriers, and a fail by an increase in isolated miles. Major barriers should be catalogued in a database (Umpqua dams, Cedar Creek weir, etc.) and the database updated whenever passage status changes at one of these. For smaller barriers and potential barriers (primarily culverts) two monitoring efforts are appropriate: first, enhanced tracking of mileage gained by removals and replacements, and second, periodic re-examination of at-risk structures. The latter would include, for example, undersized culverts with the potential to downcut at their outlets and become barriers.

Several metrics might productively be developed form the parameters being collected in the spatially randomized Aquatic Habitat Inventories. An additional one should address trends in prospects for recruitment of large conifer logs to Coho streams. This could include EMAP randomized surveys of conifers in riparian areas, and in high-risk slide zones in places where delivery to fish-bearing streams is likely. Another could track trends in number, size and winter-persistence of beaver ponds. Another, trends in abundance of substrate categories. An increase in the abundance of bedroock would be worrisome for example, an increase in gravel gratifying.

12. Criteria for Dependent Populations. Criterion 1 - Spawner Trend. P. 14. There are significant design issues with using spawner surveys for tracking health of dependent populations. Basically, to make it work with reasonable sensitivity (ability to detect trends) spawning surveys need to be done in each dependent population each year, and these need to be designed to give unbiased and inter-annually comparable results. As I noted above (comment 9), and as the MCWC has already tested, a better and more cost-effective metric can be developed using summer surveys of juveniles. Complete surveys of Coho juveniles in all the identified dependent populations in 2005 were accomplished for a cost of about $40,000. Because this initial survey found some of the listed dependent populations unsuitable for Coho, and not worth re-surveying, we expect our 2007 survey to cost about $34,000. For an annual survey design, significant further savings could be achieved by limiting effort to reaches identified in the surveys as suitable habitat, and by dropping streams identified as unsuitable.

13. Criteria for Dependent Populations. Criterion 2 - Habitat Conditions. Pp. 14-15. Tracking habitat conditions on dependent populations is completely appropriate and as I noted in comment 11, should also be done for independent populations. The stakeholders and staff need to work on developing more sensitive metrics, thresholds, and assessment protocols, again as noted in Comment 11.

14. Promote Beaver Dams and Associated Habitat. Pp. 25- 32. This section provides a good overview of the importance of beaver ponds to coho production. It should be expanded, however, to discuss the interactions of beaver ponds, large conifer supply and delivery, and forestry practices in affecting coho productivity. We see stream corridors

where current buffers are not effective in providing large conifers for eventual delivery to the stream, and see beaver dams as an alternate pathway to increased productivity.

Unfortunately, the proposed actions are grossly inadequate to actually achieve meaningful results. As noted (p. 29) the monitoring shows no significant increases in beaver pond abundance between 1998 and 2003, so the proposed action is to just continue the same stuff that has not shown results?

The analysis reported here and in the Coho Assessment lacks much power to detect trends, but in fact, the overall result of no trend seems to be a composite of conflicting trends in different monitoring areas. It appears that the North Coast showed an upward trend, and the other three showed downward trends. One major issue with the analysis is that the metric used does not measure as well as some others might, actual changes in beaver-mediated coho habitat. The stream habitat survey data include a variety of parameters for beaver ponds, and the dam count used here is less sensitive to changes important to fish. Even so, the analysis results, and our own observations, indicate a likely downward trend in beaver pond habitat available to Coho in the MidCoast area. The analysis should be re-done to directly measure trends in the other, more relevant parameters. The MidCoast Watersheds Council is preparing a grant proposal to, among other tasks, do those analyses.

The conservation plan should include commitments by ODFW and the other relevant agencies to open rule-making efforts to provide better tracking and regulatory management tools to foster increased beaver activity in those areas where it will be most important for coho productivity.

15. Artificial Propagation. Pp. 32-41. As noted in my note to the Stakeholders of May 18, the MidCoast Watersheds Council Technical Team has gone on record as supporting the discontinuation of Coho hatchery releases in the Salmon River. On June 1 the full Council endorsed this support. I am instructed to support that action.

16. Artificial Propagation. Nehalem, p. 36. My draft catalog of phenotypic diversity (attached) includes the information that the myxosporidian pathogen *Ceratomyxa shasta* is present in the Nehalem River system, and that native Nehalem Coho are genetically resistant, unlike those in other coastal streams. If hatchery releases are to be continued in the Nehalem system they need to be managed to insure that they do not compromise this resistance, and that they do not increase the risk of *C. shasta* invading other basins.

17. Artificial Propagation. Tillamook, p. 36. A few years ago the Trask hatchery was one of three (with Cedar Creek and Salmon River) proposed for closing. The basis for closing Trask was accumulated deferred maintenance threatening the viability of continued operations. Have these maintenance needs been addressed? If not, does it make sense to codify in this plan releases that may not be sustainable for fiscal or logistic reasons?

18. Artificial Propagation. P. 37. A paragraph needs to be added about the Alsea system. This should point out that a Coho hatchery program was present in the Alsea until the late 1990s, and that evidence exists that ecological interactions between hatchery and naturally produced smolts may have contributed to the poor performance of the Alsea population that resulted in its failing scores in the Assessment. It should also point out that the Alsea population has improved since, but since the discontinuation of the hatchery program has coincided with improved ocean survival for the whole ESU, the relative contributions of these two factors are hard to separate.

19. Harvest Management. Pp. 42-49. The current basis for harvest management (Amendment 13) is certainly an improvement on past practices. However, if our goal is to bring all our individual populations to viability and health, and to keep them there, some modifications will be desirable. It appears that the Measure 13 criteria for "full seeding" lead to underestimates of the maximum escapement that would productively contribute to their offspring smolt production. Obviously, at some point, so many adults could return that additional returns would have no positive effect on the number of smolts raised (density dependence). Again, it appears that the calculations used for Amendment 13 underestimate this threshold, or carrying capacity. If this is correct, then the effect would be two-fold: the <10% criterion for a major basin would be a larger number, and the Level-1 and Level-2 numbers would also increase.

In addition, the TRT's work and the state's Assessment have greatly increased knowledge of the status of individual basin populations throughout the ESU. Therefore, it will be worthwhile re-visiting the Criteria in Table A-3, Appendix A of Amendment 13 as to definition of "major basins." We likely now have a better basis for those criteria.

20. OWEB. Pp. 50-53. Section 8.2.4. This section appears accurate, but needs augmented. How much has OWEB invested in the ESU for restoration/enhancement intended to benefit Coho? In what categories? How many councils supported? Biennial differences in support? When assessments completed? Etc.

The text also needs editing for clarity. For example, the following sentence is confusing, mainly because it jumps between scales. "The competition for funding has resulted in inconsistent funding and the stable level of funding has not allowed the capacity of groups to be adequately grown with state funds." Statewide, the level of funding has been stable, but the criteria and performance measures (and actual performance of individual councils) have changed each biennium, so on the local level, the portion of the statewide pie available to a given council has been inconsistent.

21. ODF. Pp. 54- . Private Forests. This section speaks of sustainability: "With sound, balanced management, they can produce a sustainable array of environmental, economic, and social benefits. These benefits are not in conflict with one another. We need to sustain *all* of them to sustain *any* of them." It also speaks of a "language for discussion and measurement" of sustainability. The implication of this section is that ODF has an

interest in sustainable practices, and sees the overall mosaic of uses as generally constituting sustainability. Several trends, however, tend to challenge this conclusion. The following discussion is broader than necessary for a narrow focus on Coho, but in my opinion cast some doubt on the overall picture of Oregon forest management described here, and suggest it is less compatible with Coho rebuilding than we would wish.

A. A large majority of the private industrial lands in the portions of the ESU where I work have either changed hands, or undergone major corporate restructuring within the past 7 years. This is an area where the largest private owners are the ones formerly known as Georgia Pacific (then The Timber Company, then Plum Creek), formerly known as Boise Cascade, formerly known as Simpson, and formerly known as Willamette. This pattern may not be as extreme in other portions of the ESU, but Longview Fiber is currently subject to a hostile takeover attempt.

B. Over the last several decades, and continuing within the past 7 years. The large industrial owners are shortening rotations. In the 1970s, the larger companies spoke of 75-90 year rotations. Now most of the larger ones have rotations less than 50 years, and much of the acreage is on 35-year or shorter rotations. It would seem to me that stability of management should be an aspect of sustainability.

C. The section speaks of diverse objectives of forest managers. In my area, the diversity within private lands breaks out along ownership lines. Some owners are still growing large trees on longer rotations, but these are mostly, if not all private family ownerships, Starker Forests, Thompson Timber, etc., and are much smaller than the companies named in A above. The result is, the diversity is much less evident than implied, on the private ownerships.

D. Given A, B, and C above, we may need to be concerned over whether sustainability of **timber harvest** is achievable in the ESU under current corporate structures, and if harvest is not sustainable, I doubt we can expect these private lands to contribute as much as we would like to multiple-resource sustainability.

E. For decades, the value of a mosaic of age classes to wildlife in Coast-range forests has been extolled. The primary public emphasis has been on deer and elk. The shortening rotations should contribute more habitat for these animals. However, the increased and more effective use of herbicides in industrial forestry has greatly reduced the value of regenerating clearcuts to large game, by suppressing the vegetation most valuable to them.

F. Oregon was a leader in adopting a Forest Practices Act before other western states, and should be proud of that. However, this means Oregon’s act fundamentally is based on older science than other states’ regulations. While

modifications have been made, some of the protections most important to Coho are distinctly weaker than those in Washington and California.

There are serious concerns whether the riparian buffers mandated in the Oregon Forest Practices Act will ever lead to an adequate recruitment of large conifer logs to streams. Likely there are some situations where adequate recruitment will occur, but for much of the landscape, riparian areas will remain hardwood-dominated, and upslope sources will not grow large enough trees. Even for large fish-bearing streams, the specifics of the buffer requirement (management allowed outside 25 feet, with basal area requirements) can allow the harvest of the best potential conifer recruits if overall basal area is high enough. Gordie Reeves has a publication in press detailing these problems, and his findings need to be addressed explicitly in the conservation plan.

G. P. 55. "Cooperative, non-regulatory methods." In the context of A-F, above, perhaps the best way move forward in "achieving public benefits on private lands" particularly in an industrial context, would be to provide real incentives for true sustainability, with real performance standards, including longer and stabilized rotations, tree species diversity goals, road system metrics, and riparian buffer condition metrics. "Real incentives" could include re-casting property and/or severance tax policies to reward more sustainable practices agreed to in negotiated management plans.

NATIVE FISH SOCIETY

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June 16, 2006

Mr. Kevin Goodson
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RE: Comments on Draft Coastal Coho Conservation Plan

The Native Fish Society would like to offer the following comments on the state's draft CCCP with the goal of improving conservation and recovery measures for coastal coho. We begin with

a historical perspective of coho salmon planning efforts and then provide a section-by-section critique of the current planning effort for your consideration.

Introduction

Coho have been declining for over 83 years in Oregon coastal streams and in the Columbia River. The Oregon Department of Fish and Wildlife adopted a coastal coho salmon plan in 1982, recognizing coho were in steep decline and the future of wild coho populations was in jeopardy. This plan did not reverse the trend. Coho salmon continued to decline and were listed as a threatened species in 1998. ODFW management and planning have failed to reverse the declining trend of coho salmon. The significant question is whether the new coho plan being developed by ODFW is likely to be effective in stabilizing wild coho salmon populations, reducing the risk of extinction and can increase wild coho abundance and diversity in Oregon streams.

The following overviews of two historical documents are provided to create a context for the latest coho planning effort.

Historical Notes on Coho Salmon

McKernan, Don et al. 1950. Some factors influencing the trends of salmon populations in Oregon. Trans. Of the Fifteenth North American Wildlife Conference, March 6,7, and 9 1950. Washington D.C.

"Even before the turn of the century the most desirable runs appear to have declined in productivity. As indicated by the trend of Columbia River chinook landings a rapid drop in the yield was followed by a leveling off period of about 20 years, and thereafter a more gradual decline took place. It is apparent that great fluctuations in yield have occurred over the past years, but of greater importance is the gradual downward trend since about 1886. Improved fishing methods has been ever-increasing, as will be later seen; yet the resource has yielded less and less as the years pass. This phenomenon has been observed many times in other fisheries and has been in most cases attributed to overfishing."

Coho Salmon

Even considering the high 1935 catches, the trend of the fisheries has been definitely downward. Since 1935 the reduction in yield has been even more marked. (page 433)

…a very definite downward trend in the landings is evident during the past 26 years (1924-1950)

The open season on all rivers was from early in the fall before the silver salmon appeared in the bays, until early winter when very few silvers remained in the lower reaches of the river (at this

time commercial net fisheries were working in coastal rivers). The troll fishery was unrestricted until 1948. Thus the (downward) trend in catches cannot be attributed to changes in fishing regulations. (page 435) It was found that the (harvest) regulations, while changing considerably over the past 26 years, had not appreciably affected the silver salmon landings

The catch trend over the 26-year period is also downward, and this decline is so similar in all fisheries as to suggest the same factor or factors being responsible in each fishery.

In spite of improvements (in hatchery practices) the decline has continued. (page 446)

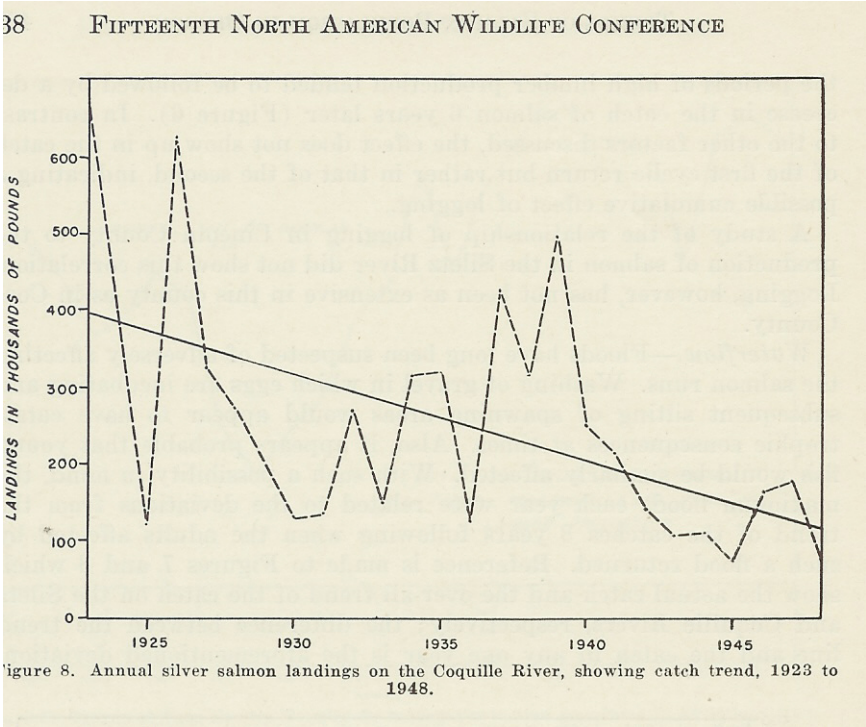


Figure 1 Wild coho salmon catch decline Coquille River 1923 to 1948

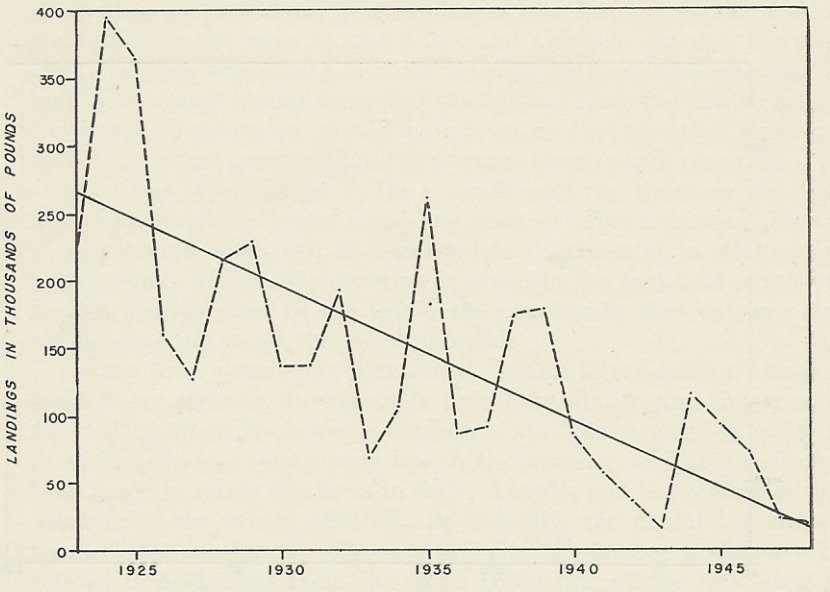


Figure 7. Annual silver salmon landings on the Siletz River, showing catch trend, 1923 to 1948.

Figure 2 Siletz R wild coho catch decline 1923 to 1948

Historic wild coho run size (shown as declining catch trend) has decreased in Oregon coastal streams for 26 years prior to the data base used by ODFW in establishing their base period (1950 to 1964) for evaluation of wild coho in their 1982 Coho Salmon Management Plan.

It would seem that logging is very probably one of the factors contributing to the fluctuations in yields and decline in silver salmon populations. (page 446)

Extreme floods seemed to be detrimental to young silver salmon, but normal fluctuations in winter high water do not seem to alter their survival.

Higher summer flows appear to be followed by an increase in resultant runs. (page 447)

Increases in fishing effort on the rivers studied were followed in succeeding cycles by a lower catch, and when fishing effort declined the ensuing production of silver salmon generally increased. (page 477)

Oregon Dept. Fish and Wildlife. June 1, 1982. Comprehensive Plan For Production And Management Of Oregon's Anadromous Salmon and Trout. Part II Coho Salmon Plan.

This first coho plan is a measure of wild coho decline from 1950 to 1979 following ramping up hatchery production (7.5 million smolts in 1960 to 60 million smolts in 1981) and an increase in the fishery characterized as exceeding the annual production capability of coho salmon.

Decline of Wild Coho Following Increased Hatchery Production and Fishing

"Prior to 1960 coho salmon production in the Columbia River and Oregon coastal streams was largely provided by natural (wild coho) reproduction."

"Depressed wild coho salmon populations and improved hatchery rearing procedures led to an accelerated hatchery program in the early 1960's. The total release of hatchery smolts in the Oregon Production Index (OPI) area increased from 7.5 million in 1960 to over 60 million in 1981. Much of the increase in recent years has resulted from private aquaculture operations on the Oregon coast."

"Wild stocks have declined (as a proportion of production) from about 46% of the ocean harvest in 1969 to approximately 25% for the period 1977-1980."

"A record high stock size of 4.1 million (adult coho) occurred in 1976 followed by a recent record low of 1.1 million in 1977. From 1977 to 1979 the abundance has averaged only 1.5 million and the expected stock size in 1980 is approximately 1.2 million. The Columbia River runs of coho salmon generally paralleled trends in the OPI area through 1967. Columbia River runs peaked in 1970 at 868,000 fish but have generally been reduced since 1971, averaging 280,000 fish for the period 1972-1979, partly in response to increased catch rates by fisheries in the ocean. The combined ocean and in-river harvest capabilities exceed the current annual production capability of the coho salmon resource." (page II.C-6)

"Coho salmon spawning in standard coastal index streams have been annually counted since 1950. Similar counts have been obtained in lower Columbia River tributaries since 1949."

"Published escapement data indicate that wild stocks in coastal streams and the Columbia River have generally declined since 1965."

"Concurrently, production of hatchery smolts increased, following development of the Oregon Moist Pellet and improved disease control. Therefore, the spawning escapement data were divided into two time frames for trend analysis; that is, 1950-1964 and 1965-1979 for coastal stocks and 1949-1964 and 1965-1979 for Columbia River stocks."

"During the period 1950 to 1964, there was no measurable change in the escapement of coho salmon. In contrast, during the period 1965-1979, the escapement of jacks and adults declined at an average annual rate of 9.3% per year."

"Wild coastal stocks of coho salmon are presently underescaped. The optimum spawning escapement of adult coho in Oregon coastal rivers is estimated to be about 200,000. Since 1972 the coastal escapement has only averaged about 129,000 adults."

"The downward trend of wild stocks spawning in the Columbia River since 1965 was even more pronounced than among the coastal stocks. The combined jack and adult escapement has declined at an average annual rate of 20.3% per year since 1965. In contrast there was no significant directional trend in the spawning escapement from 1949 through 1964."

Hatchery Returns Decline

"The escapement of representative hatchery coho salmon stocks was examined to compare trends with those obtained from wild stocks since 1965."

"Three hatcheries on the Oregon coast (Trask, Siletz, and Fall Creek) and two hatcheries situated on the lower Columbia River (Big Creek and Klaskanine) were chosen to analyze escapement trends of jacks and adults separately. Smolts liberated at these hatcheries intermingle with wild stocks in the OPI area. Therefore, the hatchery and wild stocks should be subjected to similar natural and fishing mortality factors offshore."

"The escapement of jacks per million smolts released has declined at Trask, Siletz, and Fall Creek hatcheries since 1964 (1962 brood year). Trask declined 19.7% per year and Fall Creek and Alsea River Hatchery declined 9.8% per year."

"The escapement trends of adults per million smolts released since 1965 (1962 brood year) at Trask, Siletz, and Fall Creek hatcheries were similar to jacks returning to these facilities. Trask Hatchery declined 11.8% per year and Fall Creek Hatchery declined 9.2% per year."

"Jack escapements at lower Columbia River hatcheries have also declined since 1964 (1962 brood year) similar to coastal stocks. Big Creek and Klaskanine jacks have declined at an annual average rate of 13.4% per year and 9.3% per year, respectively."

"Adult escapement has declined at Big Creek and Klaskanine hatcheries since 1965. The declining trend was not significant at Big Creek Hatchery; whereas, the adult escapement at Klaskanine Hatchery has significantly declined at an average rate of 8.7% per year."

"Hatchery smolt releases increased 4.3% per year beginning with those released in 1965 (1962 brood year) while the production of adults significantly declined 7.0% per year from 1965 through 1980."

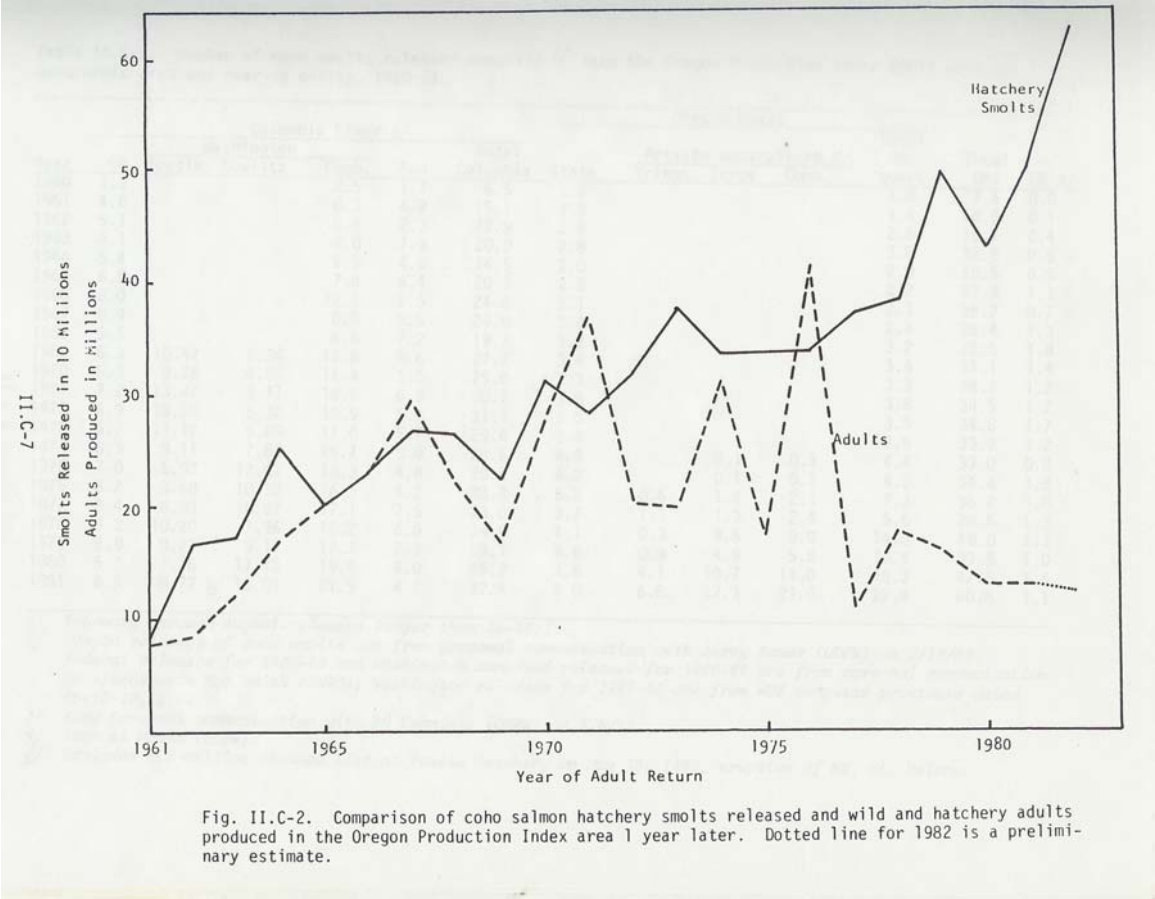


Figure 3 As more hatchery coho salmon smolts are released adult production decreases

"The soaring coho catches and increased hatchery returns occurring with the expanded hatchery program in the 1960's generated much optimism, which in turn stimulated increased fishing effort and plans for increased smolt releases. Following 1967 production of adult coho began leveling off with alarming fluctuations noticed between years. In 1977 coho abundance dropped to the lowest level since 1962 and has remained at a depressed level for 5 consecutive years. Another year of poor adult production is predicted in 1982."

"One of the more significant causes for alarm is the downward trend in the level of abundance of adult coho that occurred in spite of an increase in the number of smolts released from hatcheries. The cause of this reduced adult production is not readily apparent."

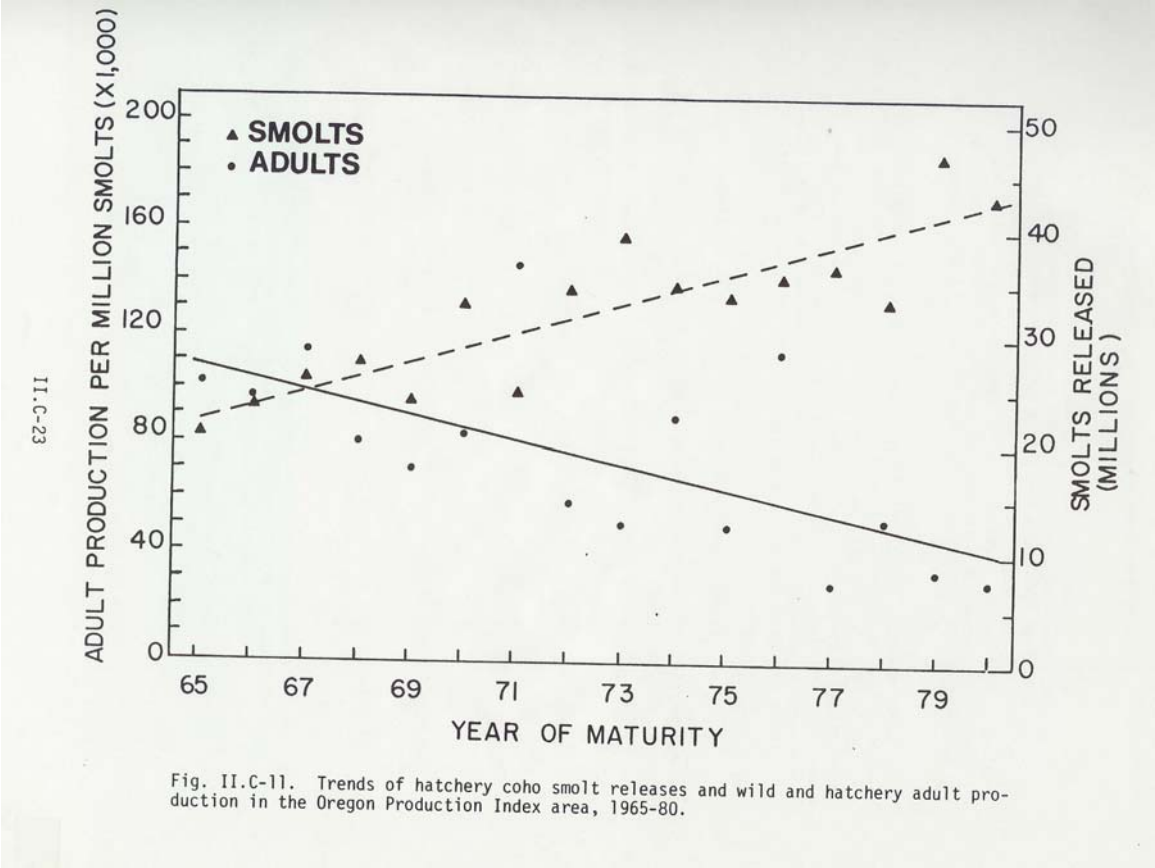


Figure 4 Hatchery coho release of 25 million smolts appears to be optimum since adult production declines as more smolts are released. Releases in 1981 were 63 million smolts.

What Was The ODFW Response To Declining Coho In Its First Coho Plan?

In the 1982 Coho Salmon Plan there were criteria adopted for hatchery and wild coho production and for fisheries.

Wild Coho Plan

The ODFW adopted a combined hatchery and wild coho management approach under the 1978 Wild Fish Policy. The escapement guideline for wild coho was 245,000 fish and allocated among individual watersheds and Table II.G-1 provided this allocation for both jacks and adults and was to be achieved on the ground by 1987. (page II.H-1)

Watershed	Wild Jack and Adult Coho Escapement
Necanicum	1,400
Elk Cr.	370

Arch Cape Cr.	35
Short Sands Cr.	60
Nehalem	35,000
Tillamook	21,500
Sand Lake	730
Nestucca	10,350
Neskowin Cr.	480
Salmon R.	2,380
Siletz R.	12,300
Fogarty Cr.	35
Spencer Cr.	50
Big Cr.	50
Yaquina R	12,300
Theil Cr.	60
Beaver Cr.	1,380
Alsea R	31,000
Yachats R.	1,500
Cummings Cr.	220
Bob Cr.	100
Tenmile Cr.	560
Rock Cr.	120
Big Cr.	460
China Cr.	25
Cape Cr.	60
Sutton Cr.	950
Siuslaw	24,900
Siltcoos Lake	4,100
Tahkenitch Lake	3,100
Umpqua R	23,500
Tenmile Lake	7,600
Coos Bay	10,500
Big Cr. (Sunset Bay)	120
Coquille R	30,000
Twomile Cr.	230
Fourmile Cr.	230
New R.	620
Sixes R	370
Elk R	100
Hubbard Cr.	25
Brush Cr.	0
Mussel Cr.	0
Euchre Cr.	0
Rogue R.	5,230
Hunter Cr.	0

Pistol R.	0
Chetco R.	0
Winchuck	0

The department states that "One primary biological consideration is the ongoing process of evolution which is working constantly within stocks to increase the average fitness of populations." The goal was to manage for this under the Oregon Wild Fish Management Policy (1978) in order to maintain wild coho production in Oregon coastal streams. The department also discouraged transfers of salmonids among watersheds, using the Department Guide for Introductions and Transfers of Finfish into Oregon Waters, recognizing that these transfers (the release of hatchery fish) were disruptive to protection of wild salmonids, but not all transfers of fish among watersheds came to an end due to this plan.

Even though the ODFW recognized the importance of protecting individual populations of wild coho and the genetic diversity they represented under its Oregon Wild Fish Management Policy, the plan does not seek to provide an optimum escapement to each coho stream. The 1982 Coho Plan states, "Ocean harvest will be regulated to achieve the optimum annual escapement of wild spawners to the production areas, but not on the basis of an individual system." (page II.G-4) (By combining wild populations into aggregations conservation management is less effective, setting small populations up for reproductive failure and extinction)

The ODFW has direct authority over harvest management and set seasons, catch and areas for legal fishing. The Coho Plan set an objective to "Provide an opportunity to harvest an average annual 2.2 million adults in the OPI area consisting of about 1.67 million hatchery and 0.53 million wild coho salmon. (page II.H-6)

The 1982 Coho Plan also calls for a reduction in the coho exploitation rate in ocean fisheries to "an average maximum of 69% (77% of the OPI); coastal wild stocks are capable of sustaining an average annual harvest of 530,000 adults; 2.5 million hatchery and wild adults will be attained in the OPI area.

The 1982 Coho Plan says, "If survival rates do not change, it would take 70 to 80 million smolts from private and public hatcheries combined to achieve the 1.77 million adults. Releases in 1981 totaled about 63 million smolts." But evaluation of smolt releases and adult survival show that releases above 25 million smolts was related to a continuing and steep decline in adult survival (Fig. 4)

ODFW also has direct authority over hatchery operations and the 1982 Coho Plan establishes an objective to "minimize hatchery stock impacts on the genetic integrity of wild stocks." (II.H-5) To achieve this the implementation plan calls for maintaining "self-sustaining wild fish populations in Oregon coastal streams at an optimum aggregate level of 200,000 adult spawners; follow stock transfer guidelines; incorporate locally adapted stocks into existing hatchery brood stocks to protect the wild gene pool; develop and use local brood stocks as required for supplementation, enhancement and rehabilitation." (page II.H-5)

ODFW has no direct authority over habitat protection that would enable it to maintain naturally spawning and rearing environments for wild coho. The agency must rely on the good work of its sister state agencies to provide the required habitat to maintain the wild coho production and harvest objectives in the 1982 Coho Plan. There are no specific habitat objectives in the plan, but it does state: "Protect and restore habitat." (page II.H-4)

Coho management in the Columbia River is based on hatchery production. There is a goal to maintain natural production of coho salmon in tributaries through stocking hatchery fish, a technique called hatchery supplementation. Management for wild coho in the Columbia River was abandoned in the 1982 Coho Plan.

ODFW ENTERS PLANNING PHASE TO PROVIDE MANAGEMENT DIRECTION IN 1983

In an April 19, 1983 memo Jim Lichatowich, assistant chief of the fish division, introduced the planning initiative, saying, "It is becoming increasingly clear to me that one of the most serious of the problems our agency faces is the inadequacy of our planning activities. Without effective planning we will continue to waste effort and resources which need to be much more efficiently directed.

Strategic plans are the top level plans that provide direction for the agency. They anticipate problems that are likely to be encountered over the next twenty years, but Lichatowich said, "Our last effort at strategic planning produced a combination of motherhood type goals and problem statements which were too general to be useful. As a result, the plan has been buried and will probably never see a public review or be used by an ODFW manager."

Lichatowich says, "We cannot ignore the mega-problems clearly outlined in our future. We must anticipate them and develop the policies which will guide our tactical and operational plans for the future. ***The most serious weakness of the Coho Plan is the lack of an implementation plan.*** (emph. added)" He wanted to reconstitute the coho planning team to develop the best specific direction possible and this was completed in 1982 Final Coho Salmon Plan.

In summation Lichatowich says, "…not to respond to our planning shortfall is a short-sighted approach which will bear bitter fruit in the future for not only our organization but more importantly for the resource and the public who depends on us to be wise stewards of that resource."

Lichatowich was prophetic for the coastal coho were listed as a federal protected species in 1998 and the ODFW listed the Columbia River coho endangered under the state endangered species act in 1999 and in 2005 it was listed as a threatened species under federal protection. In 2005 the NMFS said coastal coho listing was not warranted based on an ODFW assessment that made the claim that because the coho salmon did not go extinct in the late 1990s, they would not go extinct (a novel low-abundance paradigm).

ODFW management failed to protect wild coho salmon populations in coastal and lower Columbia River tributaries and was forced to relinquish their management authority to the federal government. Over a period of 83 years (1923-2006) wild coho declined in Oregon streams. In the Columbia River all wild coho went extinct except for two Oregon tributaries in the lower river during this period.

ODFW DEVELOPS A COHO CONSERVATION PLAN IN 2006

ODFW is now constructing a new plan to recover wild coho salmon in Oregon coastal rivers. This plan is evaluated in the following critique. The question is whether the present planning effort fully addresses the issues causing coho decline identified in the 1982 Coho Salmon Plan, the 1983 memo by Jim Lichatowich and incorporates the scientific finding relative to coho salmon production since that time.

SECTION 1. INTRODUCTION

"The Assessment concluded that the ESU is currently viable, but is only viable by a small margin. This conclusion was subsequently confirmed by the Oregon Coast Technical Recovery Team (TRT) Workgroup "Draft Biological Recovery Criteria" (2006a) that applied somewhat different metrics than Oregon's Assessment." (page 1)

The TRT in fact concluded that there was sufficient uncertainty surrounding the viability of the ESU that such a conclusion was likely not defensible. This issue was addressed at the May 22 TRT meeting in Corvallis.

"Securing the existing viability of the ESU will require the following:

- Maintain current conservative harvest management strategies
- Maintain current hatchery management programs, with some modifications (Salmon River/North Umpqua)
- Maintain existing land management protections across all land ownerships" (page 1)

We strongly support the first two strategies but ODFW's sister agencies have yet to provide evidence that (a) existing land management protections have in fact been sufficient to prevent a continued decline in available habitat and (b) how sufficient management protections could be secured given the current political climate (Measure 37, etc.). This is especially important given that the state's Assessment has found that *"a very high proportion (~ 90%) of…streams with the highest potential to produce coho is on private lands."* (emph. added). It is therefore doubtful that achieving Oregon's desired status can be accomplished without additional regulatory mechanisms and funding sources needed to secure conservation easements and/or land acquisition.

SECTION 2. DESIRED STATUS GOAL AND MEASUREABLE CRITERIA FOR THE OREGON COAST COHO ESU

"Currently, the Oregon Coast coho ESU is classified as viable. The goal of this conservation plan is to move their biological status from viable to the desired status." (page 3)

As stated earlier, viability of the ESU is tenuous at best and relies on an untested and novel low-abundance paradigm. ODFW continues to take an overly optimistic view when faced with uncertainty and this view is precisely what has lead to the historic decline of Oregon's fisheries in the first place. The goal of the conservation plan should thus be to first secure the viability of the ESU and subsequently "move their biological status from viable to the desired status".

"The underlying concept used in development of the biological criteria for coastal coho was to rely on metrics related to fish performance rather than an indirect approach of relying on 'habitat-based' metrics. Therefore, the population attributes proposed for use in this evaluation exclude the use of measured characteristics of a population's habitat." (page 5)

We applaud the set of population attributes but feel the outright exclusion of habitat characteristics, particularly measurement of ecological processes, runs counter to the goals of the plan as well as accepted principles of conservation biology. Indeed, the plan states that one of its three criteria for securing the viability of the ESU is to maintain existing land management practices, which is essentially related to habitat and only indirectly to fish performance. Additionally, various criteria for independent populations relate population attributes to habitat parameters. Habitat metrics should therefore also be included in order to better evaluate ecological processes. The draft plan appears to take an either/or approach which should be reconsidered, especially given the profound effects of forestry, agriculture and development on available coho habitat. Without an accurate and direct assessment of habitat how will be able to judge whether or not we are achieving the desired status goal of "increasing the amount of high quality habitat available to juvenile coho…" (page1)?

SECTION 7. STRATEGIC FRAMEWORK FOR THE OREGON COAST COHO ESU CONSERVATION PLAN

Most of the strategies to achieve desired status (page 20) are commendable but are overly broad for purposes of implementing a conservation plan. For example, what incentives are contemplated to landowners who participate in non-regulatory activities? How and when will current regulations be reviewed and what will be the likely scenarios to come out of such a review?

Also, the local conservation strategies do not reflect the fact that local watershed councils (and SWCD's) have had variable success rates, especially when addressing limiting factors for coho.

Unfortunately, many projects which are funded tend to be opportunistic with little relevance to limiting factors of a given basin.

The plan goes on to state "…local organizations will periodically review action plans and priorities, and place appropriate emphasis on projects that support achieving the desired status goal." (page 22)

How do we know that this will in fact occur given the track records of some of the councils and SWCD's? It would be appropriate for OWEB and other funding sources to provide such an assurance through their prioritization of projects and evaluation process but virtually none of the coastal basins have undergone a prioritization process and apparently none are planned for the foreseeable future.

SECTION 8. CONSERVATION ACTIONS

We are supportive of the strategic direction regarding ODFW's artificial propagation program as well as the population specific actions recommended but recommend that the Galesville Dam mitigation agreement be revisited relevant to the South Umpqua hatchery program. The associated STEP program should be evaluated, as well.

A discussion of legacy effects on streams such as the Alsea should also be included in the plan. It is possible that populations within the ESU could differ significantly in their genetic integrity as a result of past hatchery practices. Genetic factors could therefore affect our assumptions about resilience, productivity, etc. of specific populations.

OWEB should provide a timeline for establishment of watershed protection and restoration priorities (page 51) throughout the ESU. The lack of specific priorities and strategies from OWEB is generally unacceptable for the purpose of a conservation plan.

The sections on forestry and agriculture, although necessarily incomplete, are particularly insufficient and appear to provide little more than a broad overview of the agencies programs responsibilities. For example, ODF will need to demonstrate that current forest practices on state and private lands will assure us a sustainable supply of coarse woody debris into the foreseeable future. If not, what changes are needed? How have coho populations which rely on state and private lands fared relative to Federal lands protected under the NW Forest Plan?

Also, how will current agricultural regulations ensure an increase in available HIP habitat, especially much needed over-wintering habitat in sub-estuarine environments where the bulk of agricultural lands are located? How have voluntary actions to date affected stream complexity in these environments and what percentage of HIP land has actually been recovered (and is expected to) as a result thereof?

SUMMARY

Native Fish Society supports the overall strategy and desired status but the plan is as yet largely undeveloped and lacks assurances of implementation. A discussion of implementation is particularly needed for ODFW's sister agencies given that ODFW has virtually no authority over habitat and land management decisions. At some point, potential statutory and/or rule changes must also be considered since coastal coho continue to fall short of recovery despite 10 years of voluntary efforts and significant changes to harvest and hatchery practices.

The historical decline of coastal coho is due to a number of factors including over harvest, hatchery practices and habitat degradation. It is therefore imperative that habitat metrics, which can be used to evaluate ecological processes, be incorporated into the plan. A discussion and evaluation of the importance of carcasses to the freshwater ecosystem would also be desirable and appropriate. Overall, habitat recovery and restoration of ecological processes must become a priority for all affected agencies or the plan's recovery goals are perhaps unachievable.

Perhaps most importantly, we need assurances that ODFW and other agencies will provide an outcome that is different from the 1982 coho plan. It would be helpful if ODFW would also address the reasons for differences in desired status between the current plan and the previous version. It would appear we are being presented with a declining minimum baseline for wild coho spawner abundance over time and it would be useful to understand why this appears to be occurring.

Thank you for the opportunity to provide comments on the draft coastal coho conservation plan.
Les Helgeson, Native Fish Society

June 16, 2006

Re: *Oregon Coast Coho Conservation Plan – 05/19/2006 Draft*.

Dear Bruce,

Thank you for the opportunity to comment on the May 19, 2006 draft of the Oregon Coast Coho Conservation Plan (Plan). Our comments are mainly substantive at this stage, and only focus on the pieces that were provided. However, as I am sure you are aware, it requires significant additional pieces and revisions to make this the comprehensive plan that coho need to recover. As you are also aware, we disagree with the conclusion that the coho are in fact viable and incorporate by reference our March 14, 2005 comments on the Assessment instead of continually questioning the assertions of viability in this Plan.

Section 1:

Having followed the TRT process extensively, I disagree with the statement that "This conclusion [that the ESU is currently viable but only by a small margin] was subsequently confirmed by the Oregon Coast Technical Recovery Team (TRT) Workgroup…." In fact, the TRT's analysis never uses the word "viable" but rather "sustainable" and defines it differently than Oregon's Viability Assessment. Furthermore, the conclusion of the TRT was not whether the ESU was persistent, sustainable, recovered or even viable, but rather how much biological and statistical uncertainty existed around those statements. The TRT therefore concluded that there was very weak certainty (a high level of uncertainty) that the ESU was sustainable. The statement that the TRT agreed with the Oregon Assessment misrepresents the TRT's actual findings.

The introduction reiterates some of the key findings of the Oregon Assessment, claiming that they play a central role in the shaping of the strategic framework. However, nowhere do the actions from the various agencies relate back to those findings. After reading the introduction and the outline of sections, I was expecting to see each subsection in Sections 7 and 8, break down the management actions along the lines of 1) here's what we're doing now that is helping coho; 2) here are the additional pieces, regulatory and non-regulatory, that we're proposing to further recover coho especially as it relates back to the three key findings; and 3) here's how the agency will monitor and validate the work towards coho recovery. All three points were lacking. Thus, while the introduction lays a very strong basis for a conservation plan, the meat of the plan is missing.

Also within the introduction, the Plan requires first securing viability and second increasing the productive capacity of the populations. This second prong focuses on only one of the four biological criteria needed for recovery: abundance, productivity, distribution and diversity. (McElheny et al., 2000). To be more consistent with the prevailing literature and the ultimate goal of the Plan, I would suggest that the second prong focus on increasing and

restoring the ecological function of the populations and the habitat on which they depend to improve their abundance, productivity, diversity and distribution to a point of recovery. Simply focusing on productivity, as the introduction first describes the desired status, is not only misleading but without biological merit. Furthermore, limiting the achievement of the desired status to increasing the high quality habitat and overwintering habitat, underestimates and understates the significant improvements that must be made across all limiting factors. While arguable, these are two priorities, they are at the top of a longer list.

Finally, with respect to the goal, we support the goal but note that it deviates slightly from the state definition of recovery. The state definition of recovery in ORS 496.430 includes a time element in two key places that are missing from this proposed goal. First, ORS 496.430, states that the population will be self-sustaining "into the foreseeable future." Second, ORS 496.430 defines "self-sustaining" as "likely to survive prolonged periods of habitat, oceanic, climatic, and environmental conditions that are detrimental to a population." Thus, the legislature has recognized that a recovered population isn't defined by one, two or even five years, but rather the population must be recovered into the foreseeable future. Furthermore, the legislature recognized that it is critical that the populations be able to withstand long periods of poor conditions. Both of these time elements are missing from the proposed goal and should be reinstated to adequately reflect the current thinking of population biology as well as be consistent with state law.

Also absent from the proposed goal is a genetic element. The proposed goal limits diversity to life history and geographic distribution, neither of which adequately capture genetic diversity, but reflect some aspects of genetic diversity. The state definition of "recovery" does not restrict the definition of diversity so narrowly. We would recommend that the goal either include "genetics" to the list of diversity, or remove the qualifiers altogether. Again this will ensure that the goal is consistent with the best available science and the state statute.

Section 2:

The desired status goal in this section is much more in line with the ongoing negotiations within the Stakeholder group. With some caveats mentioned above, this desired status goal captures move the ecological and biological processes needed for recovery. The restatement of this goal in Section 1 is very inconsistent with the totality of the actual goal stated in Section 2.

However, the actual measurable criteria do not seem to add up to the desired status goal of recovery. First, the biological attributes must capture all life stages, not just adults or juveniles. Diversity should capture genetics as well as life history diversity. And finally, the biological attributes should apply to dependent as well as independent populations. Also missing from the considerations are that the criteria must be objective and measurable, not just repeatable and defensible. They must rely on the best available science, and notably this document ignores some critical publications on viability recently released. (ISAB, 2005).

A critical piece missing from the description of the measurable criteria is how the criteria will be evaluated. For example, does a population or the entire ESU need to satisfy all criteria for a specific length of time to be considered "recovered" or can some populations fail while others pass? Because this "roll up" is critical to the Oregon Assessment as well as the TRT's analysis of ESU health, some explanation of the evaluation should be included in this section.

The viability criteria were developed (also need to explain who developed them) based on fish performance rather than habitat based metrics. However, the measures fall short of capturing the total performance. Instead they rely mostly on metrics that capture abundance and productivity and use those two parameters as proxies for the other two parameters. The diversity and distribution parameters are equally important especially when discussing recovery. However, because they are difficult to measure, habitat criteria provide a substitute metric that not only captures the full ecological process of coho, but also can indicate when significant changes can be expected before the fish performance measures show those changes. For example, a landslide that creates a complete passage problem can indicate a decline in distribution long before the actual fish populations show a reduction reduction. Furthermore, the metrics are all framed in the context of "viable" ("the distribution and frequency of viable populations") but in this case the goal is some level above viability, thus the metrics essentially set the bar too low.

As for the actual criterion, they are a vast improvement over prior proposals. However, many of them simply repeat the sustainability criterion laid out by the TRT, which is a lower bar than recovery, and also redundant to Criterion 1. Please explain how Criterions 2 through 8 are additive to Criterion 1 and how they differ or are additive to the TRT's criteria for sustainability and do not follow the TRT's criteria for restoration.

Specifically for Criterion 2, please explain the rationale behind a mere doubling of the average abundance during low ocean conditions. While this raises the number of spawners and is standardized to poor ocean conditions, future conditions are much more likely to fall into the extremely low or low category and a simply doubling might not be enough to withstand continued poor oceans. Also, please consider including the graphs depicting the amount of increase per stream in the actual text.

Within Criterion 3, the metric of four times in 12 years does not provide enough certainty for recovery. In essence, if those four years are not consecutive, then there could be eight years of productivity failure, which is equivalent to 2 ½ brood cycles. Entire brood cycles could be lost completely and still qualify as a "pass" under this criterion. To suggest that this threshold is a pass under a recovery guidelines is ludicrous. The four year time frame must be triggered at least once in each brood cycle for this criterion to even come close to recovery, but even then seems very low. In fact, the population may be well into a crash before any flag is triggered under this criterion. Furthermore, Table 4 presumes that there will be very high productivity at low seeding and low ocean survival. This was not consistently the case for coho or for any other species, as critiqued in the Assessment. In other words, Table 4 completely ignores the concept of a "quasi-extinction threshold." Based on Table 4, a population would never go extinct.

Criterion 3 should at the very least explain how it is an improvement over the standards in the Assessment and from the TRT analysis to that it is a better measure of productivity for recovery.

Criterion 4 uses the wrong standard. Persistence is a measure of extinction, not recovery. The question from a recovery perspective is not the likelihood of extinction in 100 years, but rather the likelihood that the ESU will not be viable over the course of 100 years. Once the population drops below viability it is well below the standards for recovery. If the standard of measurement is actual extinction, then the ESU is outside the bounds of "recovered" long before it triggers this Criterion. Furthermore, this criterion is simply a reflection of productivity and abundance and does not capture diversity and distribution. How is this Criterion any different from Criterions 2 and 3? Furthermore, how is this Criterion any different from the TRT's criterion for "persistence" which is a much lower bar than recovery?

Criterion 5 is also a low bar with respect to recovery. First, it is redundant to one of the TRT's criteria for sustainability which is captured already in Criterion 1 and is below the level of recovery. Second, it only looks to spawning adults and not juvenile distribution which is equally, if not more, important to the recovery efforts of this ESU. In this way, the discussion and rationale section does not adequately justify the metric.

Criterion 6 is simply an abundance criterion that does not capture the genetic or life history diversity adequately enough. While this number may protect against random events, it does not protect against selective loss, and does not adequately capture diversity changes that happen on a much faster time frame. Please reconsider this criterion, possibly as a reflection of habitat metrics, to meet the recovery needs of coho. Furthermore, neither the number itself nor the discussion reflects the effective population size, nor does it discuss how this number is an adequate or accurate reflection of heterozygosity for recovery. Instead, this criterion discuss the risks of low population size with respect to extinction, but not the higher bar of recovery. This criterion, nor does the discussion, reflect the rate at which genetics can be lost without risking a population's long term persistence, never mind ability to recover and stay recovered.

Finally, the criteria for the dependent populations are also insufficient. The first criterion is premised on the condition of the independent populations when in fact the dependent populations are far more responsive, and thus much better indicators, of short term risks to the overall ESU. Furthermore, by basing the trend on stratum, the criterion misses localized events that could be addressed before they become problematic on the stratum level and thus cause an even bigger risk to the recovery of the ESU as a whole. Similarly the second criterion for dependent populations merely looks at the availability and not the utilization of the high quality habitat. Taken together, these two criteria miss the need to measure the demographic buffer, spatial distribution and diversity that are provided by dependent populations.

Section 7:

Again the discussion here on desired status should refer back to the need to restore the ecosystem function and process, as well as my comments above on other facets of the desired status goal.

As such, the strategies to achieve desired status fall short of what will actually get us to the goal. The first strategy – to continue the implementation of the Oregon Plan – is simply a status quo strategy that has already been proven inadequate. The state's own Assessment demonstrated that the activities under the current management regime have barely (and very debatably) achieved viability. Continuing this strategy is not an improvement towards recovery. The strategy to achieve the desired status should always be above and beyond what we are currently doing. For example, under this strategy, the state commits to supporting watershed councils and others to implement effective conservation measures. However simply supporting these measures is not enough. The state must create the framework and facilitate the works of these various stakeholders. The second strategy is very straightforward but does not provide a very strong blueprint to get there. The actual measures to enhance the performance of all coho populations must be much more clearly spelled out. Finally, the strategy for research, monitoring and evaluation misses a key element – completely overhauling the current data management. There is no single storehouse for the data collected, nor is there any unified effort to relate the collected data back to actual fish performance. Without this direct connection, and the adaptive management to go with it, this strategy is virtually useless.

The Plan also fails to provide any kind of oversight or unifying standards for the regional and local conservation strategies. The Plan depends very heavily on these regional and local strategies without providing any structure to increase the resources and capacities of these regional and local groups, or any oversight and monitoring to ensure that these regional and local efforts are effective. The clear message from these groups during the course of the development of the Plan was that they need more money, more stability and more resources, yet this Plan completely lacks those critical ingredients.

Section 8:

This section is very difficult to provide substantive comments. Generally, the various departments did not provide any new actions and failed to explain how ongoing efforts are sufficiently tied to fish performance measures, and how continuing the status quo will move the populations from simply viable to recovered. Instead, most of the sections are a distracting regurgitation of ongoing measures that have been criticized and found scientifically insufficient throughout this review process and even outside this process. Furthermore, most of the actions are dependent on the voluntary willingness of landowners, which, well necessary to get to recovery, must be a piece of a much larger approach to recovery. Nor do any of the departments outline how they are going to facilitate, encourage and support the landowners to come forward if they haven't already, and do more than they have been doing for coho. Speaking from personal experience, I have been unable, as a small woodland owner, to generate any response from ODFW, ODF or DWR, in my offers to make improvements to my property and water rights for native fish (namely steelhead and chinook, not coho). The support structure is woefully

inadequate and it is abundantly clear that it cannot be the cornerstone of a recovery Plan, but rather a key component. Thus, this section needs to describe a yet to be identified keystone that will ensure coho recovery.

With respect to the individual departmental sections, I offer the following comments:

Oregon Department of Fish and Wildlife

The Department has not identified any new actions with respect to beavers even though these are probably the "lowest hanging fruit" in the recovery plan. They, by far, provide the biggest bang for the buck in terms of juvenile survival, especially overwintering habitat, which is the key limiting factor in many streams. There is no proposal to track trapping, no proposal to change the treatment of beaver as a nuisance or predatory animal (notably the state can regulate beaver more strictly than the federal government, so while the Department of Agriculture may label beaver as predators, the State of Oregon can protect them). There is no indication that the past treatment of beaver has actually worked for coho, yet there is no indication that the department is planning on doing more with respect to beaver. For example, a simple improvement would be to maintain a database of high intrinsic potential habitat broken down by landowner and when a beaver is trapped and needs to be relocated there is a database that directs the trapper to a relocation site that best suits coho. Furthermore, there should be efforts to dissuade or even prevent landowners with beavers on high quality habitat from relocating them off that habitat.

The proposal for the reduction in artificial propagation is the one new, clear proposal anywhere in the Plan. It also leaves open the possibility of new hatchery production in the future. With respect to any new hatchery production, we request that there be a public review process in addition to an internal review process. Under the background section, we also note that the disruption of the nutrient cycle is missing from the ecological risks, and that behavioral risks are missing under the genetic risks. We also recommend that this section discuss the STEP program, which have a much lower marking rate than ODFW facilities, and the consistency of proposing to transfer Salmon River coho to Youngs Bay when the agency is trying to prevent the non-native stock transfers between populations. There should be some analysis, at the very least in the RME, of intraspecies production in rivers where the coho populations are limited by hatchery production. For example, in the Salmon River, the elimination of the coho program may improve the population, but will the continued production of chinook similarly cause competition and predation on any returning wild coho, which has been problematic in other species (Levin and Williams, 2002). Finally, in addition to the actual hatchery releases, the agency and the Plan itself should explore the treatment of fish in ongoing facilities, such as broodstock maintenance, breeding protocols, and other factors that may impact naturally produced coho in the systems. In the Summary, the Plan makes a very striking statement that 18 of 24 independent populations will have insignificant impacts from hatchery strays. This indicates that 25% or 6 independent populations will have significant impacts from hatchery strays. Not only does this violate the Native Fish Conservation Policy, but it is an unacceptable level of impact for a recovered coho population.

The harvest proposal should be reevaluated to see how it can support diversity and distribution in addition to abundance and productivity. Harvest can have a significant impact on run timing and individual population distributions through time and place restrictions that should be explored. In addition, the Stakeholder process raised serious questions about the use of "high quality habitat" and some of the basic assumptions within Amendment 13. None of these questions or issues have been addressed in this Plan. The Plan should also describe Amendment 15 and its status. Finally, the Plan should explain the integration of wild harvest and Amendment 13, specifically as it relates to monitoring and evaluation. As such, it is very premature to set bag limits (especially outside the fishery regulations process) for future fisheries on the Siltcoos and Tahkenitch Lakes.

Oregon Watershed Enhancement Board

The discussion by OWEB must add new proposals to the table and explain the security of funding and watershed strategies after 2013 when Ballot Measure 66 is set to sunset. We heard consistently throughout the Stakeholder process that there are shortcomings in the watershed council programs, yet none of those shortcomings are presented here, nor are there proposals to address those shortcomings and make improvements towards coho recovery.

Oregon Department of Forestry

This section should be rewritten to describe what is being done and how that relates to coho. Currently, there is no connection in this section between current actions and coho performance. The section must then state new proposals to get coho from viability to recovery. As it is written, the section is proposing to maintain the status quo for coho viability, not recovery, and makes new demands for regulatory certainty, streamlining and money to continue the status quo (pg. 67). None of those recommendations are tied to increases or improvements in coho performance and recovery, but in essence request a roll back of current requirements which do not go far enough for coho. (71 Fed. Reg. 3033, Jan. 19, 2006).

The section fails to recognize the multiple criticisms of the Forest Practices Act that have found its long term application to be inadequate for coho. (Reeves et al., 2003; Burnett et al., 2003; Burnett et al., *in press*). The proposal ignores the peer reviewed science that states significant amounts of wood, as much as 80%, comes from upland sources. (*Id.*). In fact, failure to manage for the upland sources of wood, especially on private land, will lead to a long term decline in large wood in coho streams. (*Id.*). In essence, reliance of the Forest Practices Act will not only *not* get coho to recovery, but will likely undermine their ability to remain viable over the long term. However, none of this is addressed or even acknowledged in the Plan. There is no proposal to deal with the wood delivery process from all sources, not just riparian areas. Nor is there any proposal for maintaining wood in channels, or encouraging beavers in riparian areas. Within riparian areas, there is no discussion of diversifying wood types, such as hardwoods, to restore the ecological processes. And finally, there is no discussion, nor any proposal, related to future changes in land use that will potentially disrupt and reduce high intrinsic potential

habitats. (Kline et al., 2001). Even more discouraging in this section is the lack of any connectivity to coho. This is vital given that the plan acknowledges that fifty percent of the highest potential habitat is on private forest land. Nor can the state rely on federal lands, which are very important in the wood delivery process, but are also undergoing changes, such as the lands managed by the Bureau of Land Management. There are no indications that the Northwest Forest Plan will continue to guide management on forest lands, or that the application of the Northwest Forest Plan to federal lands is sufficient to overcome the deficiencies of the Oregon Forest Practices Act.

The only discussion in this section that is remotely related to coho and describes efforts to maintain and restore ecological processes is the discussion on salmon anchor habitats, which falls under the state lands and not private ownership. With respect to the state lands, there is no discussion of the current management changes and the multiple studies that have found the current management to be inadequate to balance the needs of timber harvest and wildlife management.

Oregon Department of Agriculture

Similar to the Department of Forestry, this section does not describe how the current actions are connected to coho viability and performance, how they will lead to recovery, or what new measures are proposed. This is especially disconcerting given that the other fifty percent of high intrinsic potential habitat is located on agricultural lands. This section should address why more streams are on the 404(d) list and why few are being removed, how the issue of pesticide spraying is being addressed in the absence of a listing, the efforts to deal with tidegates and restore streams to their floodplains, and finally, how the agricultural industry can improve riparian areas and work with the timber industry to leave trees in channels.

Oregon Water Resources Department

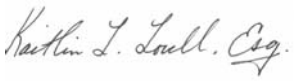
As discussed throughout the Stakeholder process, a critical piece of missing information is how much water is being removed from each stream, and how that compares to the instream water rights. Without this information, it is impossible to evaluate whether voluntary agreements are sufficient, if water availability is limiting for some streams, and what changes can be made to improve water and flow for coho.

Conclusion:

While this Conservation Plan is a good starting document and finally provides something for the Stakeholders to react to, it falls far short from a working Plan for coho recovery. There was significant changes and attention paid to the desired status discussions and the programs under ODFW's management, but very little in the way of other programs and how those programs related back to the desired status for coho.

Thank you for the opportunity to provide these comments. I look forward to the continued discussion and evolution of these documents.

Sincerely,



Kaitlin Lovell
Salmon Policy Coordinator
Trout Unlimited

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Blake Rowe's Comments on the 1st Draft Plan:

Re: Coho Conservation Plan

Dear Kevin:

Thank you for the opportunity to comment on the draft Oregon Coastal Coho Conservation Plan (Plan). I have participated on the stakeholder review team from the start as a representative of the Oregon Forest Industries Council and I appreciate the hard work the department has done to produce the Plan.

Specifically, I support the Plan's commitment to several issues that landowners share as critical to our future success as a state. A commitment to keeping forestland in forest use is a win for the fish and a win for the economy. The focus in the section of the Plan on Forestry regarding research and monitoring is appropriate as we refine our knowledge about these dynamic stream/fish systems. And finally, the continued call for appropriate levels of education and technical assistance, especially to landowners who do not have expertise in-house, is welcome.

I also appreciate the acknowledgement of all of the contributions forestland owners have made, and continue to make, via the Oregon Plan. Those contributions to Coho, water quality, and fish habitat in general continue to be the most significant, both in terms of dollars contributed and habitat improved, of any land use. We have stated many times that existing rules and current voluntary contributions will improve habitat conditions greatly both in the short term and over the long run.

While others on the stakeholder review team continue to pressure ODFW to pursue more regulations and restrictions on forestlands, ODFW has appropriately resisted these efforts. We strongly support the conclusion of the Assessment that Coho populations are viable. We also support ODFW's general approach to future conservation actions; keeping the focus on voluntary efforts, what is best for Coho, AND what is most efficient for society to implement. Many people forget that while landowners do have a duty to protect public resources like clean water, society must bear the burden of the recovery of species impacted by many and varied stresses to those species. Landowners are generally supportive of ODFW's desire to address all limiting factors without putting a disproportionate emphasis on private forestland.

I appreciate your effort throughout the Assessment and the Conservation Plan to keep the focus on current data and research. It is not uncommon for forestland owners to see old studies, sometimes decades old, trotted out again and again as evidence that current practices and rules are inadequate. What, if any, changes are needed in the future should depend on the results of current and future research and monitoring efforts.

In regards to suggested future efforts, we could support the two potential forestry measures identified in the draft, which should improve habitat. First, the simple falling of trees to provide immediate large wood where it is needed is a low cost way to improve instream habitat without materially reducing the ability of streamside areas to contribute large wood in the long term, especially on smaller streams. Second as a voluntary measure, allow wood and sediment to be mechanically moved from upstream of a road

crossing to downstream of a road crossing and placed back into the stream channel. This should improve the cycling of wood and essential sediment through the stream system. Current rules require us to remove material that blocks or threatens road-crossing structures, but prevent us from returning the material to the downstream channel. This interrupts the flow of wood and sediment to downstream reaches.

You probably should also provide additional discussion of the social issues involved with large wood placement. In spite of everyone's best efforts, wood can and does, move in the stream system. When that happens, it can cause conflict and impacts with boaters, fisherman, neighbors, County Road Departments, etc. The Conservation Plan should include some measures to address these issues, educate the public, and mitigate the costs of keeping wood in the system, especially in the low gradient, lowland streams.

ODFW has also appropriately ended the Plan with an entire section on the importance of research and monitoring. As noted above, this is the key to future changes. There is likely great potential in measures that have yet to be developed or refined. Without future research and monitoring we will not be able to continue to improve.

Thanks again. Please feel free to contact me with questions.

Very truly yours,

Blake S. Rowe
Senior Vice President – Timber
Longview Fibre Company

ct

June 14, 2006

TO: Kevin Goodson
ODFW
3406 Cherry Ave. NE
Salem, OR 97303

FROM: Paul Engelmeyer

RE: Comments concerning ODFW's draft Coastal Coho Conservation Plan (CCCP)

I appreciate the opportunity to comment on the draft Oregon Coastal Coho Conservation Plan and support the general direction that has been laid out for the Desired Status/recovery planning effort. I also have a number of issues that I will draw attention to in hopes that they can be addressed in the next draft.

The documents is very clear in the statement concerning the Desired Status (revised Section 2) and I support this direction - …"Achieving these benefits for current and future generations will require measures(management actions) that conserve and restore the key biologic, ecologic, and landscape processes that support the ecosystems upon which salmonid species depend."

A problem I see is that there appears to be disconnect when the document states that securing the existing viability of the ESU will require the following:
- Maintain current conservation harvest management strategies.
- Maintain current hatchery management programs…
- Maintain existing land management protections across all land ownerships.

The Coastal coho assessment indicated that coastal coho were barely viable under current habitat conditions. And so when one reviews the IMST reports on Forestry as well as their Lowlands Report, look at the development taking place in those critical areas that are now being called 'high intrinsic potential' habitat that existing management does not protect stream habitat conditions necessary for salmon recovery over time in the uplands nor the lowlands.

When dealing with Coastal Coho recovery there has been significant emphasis on the PFMC's Amendment 13. While the reduced harvest impacts under the direction of Amendment 13 are a huge improvement, I believe that under existing habitat conditions there is a significant risk under poor marine survival conditions to continue with the depressed 'at risk' status. This is not acknowledged in this document but has been in the assessment.

I still have significant concerns about some of the details embedded in Amendment 13 and have attached my comments which I submitted to the Coho Stakeholders team and ODFW earlier. At this point I have yet to get any response to my concerns. It would be great if ODFW could address the issues I have identified. I understand the PFMC

Salmon Plan Amendment 15 review was to be initiated in 2005. Has this occurred? The key issues that must be addressed in the conservation plan are absent at this point ie strengthening forestry practices, improving agricultural management, and limiting coastal development in those critical floodplain areas. Amendment 13 changes are details that should be reviewed, assessed and updated with our most up to date information.

Within the Stakeholder and the ODFW Assessment process there appeared to consensus that 'Stream Complexity' was the most significant factor facing coho recovery. At this point, I do not see any habitat target/benchmark or management measure that will effectively address the issue of improving stream complexity/over wintering survival.

P.9 Table 2 - The desired status goals for adult coho abundance uses the Life-cycle monitoring sites smolt to adult survival. I have some concern about this strategy. While I fully endorse the life-cycle monitoring effort I am not confident that those sites actually represent the habitat conditions in the majority of our coastal streams. I urge ODFW to look closely at this and ask for an independent perspective before this strategy moves forward. As I stated previously Amendment 13 /full seeding/ harvest rate triggers need to be reviewed. Does it make sense to increase exploitation rates to 30 and 45 % when we have the majority of our coho populations in a dependent status? Our independent populations need to fully saturate those basins and then stray into the dependent populations watersheds. We are doing thousands of dollars of restoration work in many of those dependent populations watersheds shouldn't there be a clear criteria established that deals with this issue. ODFW knows that it is extremely difficult to establish population estimates for these smaller basins.

Table 3 - Abundance goals under different marine survival conditions. Will ODFW be using their Stratified Random Sampling (SRS) methodology? I again raise concerns I have identified concerning full seeding and spawning surveys. The document needs to clarify how ODFW will establish multi-year running averages with different ocean conditions.(See comments later concerning Amendment 13.)

Criterion 5 - Within Population Distribution

This appears to be a shifting baseline. From my perspective I could not give a passing grade when only having 50% of our 5th field HUCs spawning areas to average > 4 fish per/ mile. This is should probably be a threatened status. I'm not confident using an average because there could be a few 6th field HUCs that are keeping the independent above the critical threshold level.

Within population distribution I would urge you to consider snorkel surveys throughout the basin in the heat of the summer to get real time distribution.

The Criterion for Dependent Populations metric does not work well for me. I am very confident that the existing population estimates that are being used by ODFW for our mid-size streams (dependent populations) are not accurate. In the recent past the data

showed that there were over 100 fish per mile in those streams but this was not real. Just look at the summer Rapid Biodiversity Assessment snorkel data that ODFW has collected or data from the MidCoast Watersheds Council RBA projects. Either the populations estimates were inaccurate or the egg to fry survival was incredibly poor. Since I do spawner surveys in the Ten Mile Creek basin I am very confident that the recent past population estimates are flawed. I would urge you to consider using RBA snorkel surveys in the dependent populations to compare to the independent populations.
I believe the most appropriate scale for recovery planning should include a demic as well as a meta-population strategy such as the discussion in "Upstream, Salmon and Society in the Pacific Northwest" (NRC, 1996).

When dealing with Dependent populations I would urge ODFW to review **USDA, GTR-PNW-468 January 2000 Biological Characteristics and Population Status of Anadromous Salmon in Southeast Alaska**, it becomes clear that it is reasonable and appropriate to designate small populations as critical components in any conservation planning strategy. The report states that "Roughly 2,000 coho salmon stocks in Southeast Alaska are found in small to medium streams. Coho populations in these systems tend to consist of fewer than 1,000 spawners, often less than 200 spawners. The report goes on, **'Small streams with small populations are the most sensitive to the threat of overexploitation (Elliott and Kuntz 1988, Hilborn 1985) and thus may be as useful indicators for management strategies.'** The Criteria basically ignores what could in fact be a key indicator for population structure. One conclusion could be that overexploitation has already driven these smaller dependent populations to localized extirpation and/or that there is little to no data. I would urge ODFW to review of historic distribution patterns with a focus on smaller populations/demes then run a viability analysis that includes distribution and connectivity. And then develop criteria that deal directly with the dependent populations. The Forest Service /BLM and local watershed council are doing much needed work in basins identified as dependent populations. What are the criteria to measure success of this effort?

Page 20 A. Strategy to Achieve Desired Status
This is were I would include clear direction to do the following;

- Establish a timeline to review and revise Amendment 13, and the full seeding issue.
- Establish a process to peer review the effectiveness of SB1010.
- Have an peer review team pull all recommendations identified by the Independent Multidisciplinary Science Team (IMST) that would relate to salmon recovery strategies ie stream complexity, lowlands, forestry practices, water quality/stream temperatures and see what has actually been incorporated into the various state department management measures, then establish a timeline to complete the process.

Page 51 Watershed Assessment
I have worked with the MidCoast Watersheds Council for over 10 years and I am very supportive of local efforts to assess watershed health using the OWEB manual. But if we do not deal with management measures that truly protect and improve habitat conditions there will continue to be a decline in habitat quality and stream productivity. The local efforts cannot deal with rule changes for forest practices or a GIS roads layer from all

landowners or a clear direction to protect unstable slopes the source of large wood that our streams need.

Page 76 Oregon Department of Agriculture
The question should be does 100% the Water Quality Management Plans actually achieve improved water quality and stream complexity? The Lincoln County Soil and Water Conservation District sent a letter to the Coho Stakeholders and the Technical Recovery Team asking for clear direction concerning riparian management on agricultural lands. From my perspective I can see WQMP plans are being written but I see very little if any changes occurring on the landscape because the plans do not give clear direction to improve conditions. I urge an independent team do field visits to actually see what is happening out in our agricultural lands to see if in fact stream conditions/riparian/passage/ all of the issues identified by the IMST in their Lowlands Report are truly happening. (See attachment from LCSWCD)

Page 90 Research, Monitoring and Evaluation
I have significant concerns about the High Aquatic Potential strategy the ODF is attempting to move forward and urge ODFW to review the latest information about sources of large wood recruitment before and final decision concerning the HAP direction.

The Coastal Lakes assessment effort should be a high priority. But all of the coastal should be included, and there should be clear direction to deal with the issues identified/water quality/quantity/sediment and invasive species/bass.

Memo: Donna Silverberg, Coho Stakeholder Team, Ed Bowles, Kevin Goodson, ODFW

Subject: Amendment 13 / coho population issues

I have identified a number of critical issues for clarification concerning Amendment 13 and the model used to manage our Oregon Coastal Natural Coho.

Seeding and Habitat Quality

- Amendment 13 and ODFW need to clearly define what is 'full seeding'. It is my understanding that when Amendment 13 discusses ‘full seeding’ it actually is referring to only about 25% of the anadromous habitat in our OCN rivers and lakes – 'the high quality habitat.' When ODFW establishes a population estimate (seeding levels) for a basin do they count fish from other 75% of the basin or just the spawners in the 'high quality' habitat?

- Year to year total habitat miles by basin appears to be a moving target. Why? From one year to the next a basin may have 20 - 30% change in total habitat miles. Please clarify.

- Can ODFW provide local watershed councils with a map identifying high, moderate and low quality habitat? I'm sure the Technical Team for the MidCoast Watersheds Council would like to review such a map for the central coast sub-unit basins.

- When ODFW establishes population estimates during poor marine survival years do they only count spawners in the 'high quality' habitat. When there is moderate or good ocean conditions, it appears as if Amendment 13 uses seeding criteria based on low marine survival. Wouldn't it be more appropriate to increase estimated number of spawners needed seed the available habitat when marine survival is moderate or good?

- Marginal habitats and dependent populations appear to be of little importance within this management strategy. Dependent populations may in fact have critical and irreplaceable genetic resources. The analysis that led to the establishment of population structure could easily be wrong as well. What are the implications to losing multiple demes/dependent populations? What is the scientific rational to increase fishing pressure (incidental impacts) when populations are at 50% seeding of the good quality habitat in the 'independent population' watershed thereby postponing the recovery in to the future. I believe it is essential that management acknowledge marginal habitats and smaller 'dependent populations' such as Yachats River or Rock Creek when deciding when to increase exploitation rates. In some cases we know the dependent populations are seeded any where from 10 -30% capacity, and if in fact their recovery is linked to the adjacent 'independent population' what is the justification to increase incidental mortality.

Severe Conservation levels

- In the past Amendment 13 identified basins with a 'Severe conservation problem' to be at less <10% full seeding of best habitat. If you look at this direction closely it becomes clear that this management strategy is not conservative enough to protect the genetic integrity of many of our coho populations. For example using this habitat-based model, in the Tillamook basin the spawners needed to fully seed the best habitat is 2,000 adults. So, this 'severe conservation direction' would not be implemented until there is less than 200 spawners returning to the whole Tillamook basin. **Does the ODFW really believe there is not a severe conservation problem until the adult abundance estimates for all five rivers emptying into the Tillamook basin has reached the low of 200 returning adults?**

- The document acknowledges the importance of the need to protect the genetic integrity, and the risk of decreased reproductive success at low abundance and the difficulty of identifying the "Critical" Category with regards to low spawner abundance estimates. But I am very concerned that the document direction for using 4 /fish per mile (fpm) as the critical trigger to be too low to protect the populations at the demic scale. When one divides total spawners by the number of miles in each basin the risk of estimating a fpm density that does not truly reflect the low spawner

densities throughout the whole basin is real. Please review past OCN coho Stratified Random Sampling data for examples. During the low abundance years the majority of the surveys are <4 fpm but when averaged together with the few surveys that had fish densities in the mid-teens the average is over 4 fpm. So, I am concerned that averaging fish densities per mile does not reflect what is really happening at the basin scale.

Ground- truthing the model

There has been concern in the past for the accuracy of the inventory information upon which much of the "validation" of the model depends. Accurate estimates of both juvenile and adult populations in natural systems are extremely difficult to obtain with most commonly used methodologies. Major sources of error include small sample sizes, short time frames, and observer bias. There also exists a high potential for error in some estimated metrics. Compounding this is high observer variability in the interpretation and analysis of the data. Finally, there is little long-term information available to empirically validate the habitat/smolt production relationships. Transparency and validation of the model for interested parties would be very helpful.

- How exactly is the amendment going to utilize the ODFW life-cycle monitoring data – smolt production from each site to verify model abundance estimates and ocean conditions? Are the various monitoring sites a real representation of existing aquatic habitat conditions throughout the Coast Range? There is very interesting data concerning fresh water survival rates and the

- Data from MCWC Rapid Bioassessment on fish distribution indicates summer parr distribution patterns may be different than model projections at the reach level. I would urge the Work Group to discuss this issue of seasonal distribution with ODFW Research and review data gathered from Mid-Coast Watersheds Council Rapid Bioassessment Project.

- The habitat model uses an egg deposition to summer parr as a constant 7.2% for all stream reaches when at full seeding. How was this data point derived and does this truly reflect the condition of Oregon coastal streams? I understand from the ODFW AQI data set the % fine sediments in our streams were higher than expected.

- Has the model been adjusted as a result of this information? What are the implications of over predicting survival at this stage of the model? Does the model take into account significant storm events, accelerated sedimentation, bedload scour, and channel stability, all of which are significant factors affecting early life stage survival. Does this model take a conservative approach if data is unavailable?

- The model looks at habitat carrying capacity by basin and sets abundance criteria for full seeding but fails to discuss stream productivity in relation to nutrient recycling. Bilby, Cedarholm, and Brickell have all documented the fact that spawned out carcasses are a vital source of nutrient enrichment which stimulates primary production in streams and contribute to a variety of ecological functions. This

research must not be ignored when developing basin specific escapement goals and harvest rate triggers. It is my understanding that the IMST has drawn attention to this issue. Please acknowledge how the model has incorporated this information.

Attachment 2

The Mid Coast Watersheds Council and Lincoln Soil and Water Conservation District have struggled to reach consensus on the minimum coastal lowland riparian forest buffer widths needed to meet water quality standards and ensure salmonid recovery. Unlike forested uplands, many riparian areas in lowlands receive little or no protection.

According to the Independent Multidisciplinary Science Team (IMST), few studies examine what percentage of a landscape must contain intact riparian management zones, and where the riparian management zones should be located to be most beneficial for maintaining quality salmonid habitat. The IMST further notes that fixed-width buffers are easy to determine but do not necessarily consider variations in the landscape, while variable-width buffers are more difficult to determine but do consider variations in the landscape and stream function. An alternative approach to determining buffer widths is based on the flood-prone area of a stream or river. However, naturally functioning lowland streams and rivers are generally less constrained than upland stream systems and thus the wide floodplains may or may not be feasibly protected.

As a result of the above, the IMST has called for the establishment of science-based riparian area protection guidelines. In addition, they recommend that a statewide riparian policy be developed and implemented to provide healthy riparian areas in sufficient quantity to achieve statewide water quality standards and protect and restore aquatic habitat for salmonids.

The Natural Resources Conservation Service (NRCS) published a Riparian Forest Buffer conservation practice standard in 2003 that establishes the minimum riparian buffer width at 100 feet or 30 percent of the flood plain whichever is less, but not less than 35 feet. In January 1999, a fact sheet was produced by the Washington County Soil and Water Conservation District (SWCD) and the Small Acreage Steering Committee. While acknowledging the minimum 35 foot buffer recommended by NRCS, this fact sheet recommends a minimum of 50 feet to achieve aquatic habitat benefit. The 35 feet of buffer is considered only sufficient to stabilize the stream bank and filter sediment. For maximum flood

protection, it recommends that a buffer extending the width of the 100-year floodplain may be desirable.

Many agricultural landowners in the coastal valleys are reluctant to reduce their limited pastures by developing riparian forest buffers beyond their current width and vegetative composition. They relate stories of how their ancestors settled the coastal valleys shortly after the coast range fires of the mid-1800's and remember salmon being plentiful. Therefore, they question the science that serves to demand more sacrifice from them in the name of salmonid recovery.

To move forward in our salmon recovery efforts, it is imperative that the criteria developed for Coho recovery clearly define the riparian forest buffer requirements for the coastal streams from the headwaters down to the estuaries. The criteria should be specific and include expected widths, plant composition, etc. or provide formulas for determining site-specific management actions.

22 May 2006

Oregon Coast Coho Stakeholders Group
And
Oregon Working Group of the Coastal Coho Technical Recovery Team:

The Mid Coast Watersheds Council and Lincoln Soil and Water Conservation District have struggled to reach consensus on the minimum coastal lowland riparian forest buffer widths needed to meet water quality standards and ensure salmonid recovery. Unlike forested uplands, many riparian areas in lowlands receive little or no protection.

According to the Independent Multidisciplinary Science Team (IMST), few studies examine what percentage of a landscape must contain intact riparian management zones, and where the riparian management zones should be located to be most beneficial for maintaining quality salmonid habitat. The IMST further notes that fixed-width buffers are easy to determine but do not necessarily consider variations in the landscape, while variable-width buffers are more difficult to determine but do consider variations in the landscape and stream function. An alternative approach to determining buffer widths is based on the

flood-prone area of a stream or river. However, naturally functioning lowland streams and rivers are generally less constrained than upland stream systems and thus the wide floodplains may or may not be feasibly protected. As a result of the above, the IMST has called for the establishment of science-based riparian area protection guidelines. In addition, they recommend that a statewide riparian policy be developed and implemented to provide healthy riparian areas in sufficient quantity to achieve statewide water quality standards and protect and restore aquatic habitat for salmonids.

The Natural Resources Conservation Service (NRCS) published a Riparian Forest Buffer conservation practice standard in 2003 that establishes the minimum riparian buffer width at 100 feet or 30 percent of the flood plain whichever is less, but not less than 35 feet. In January 1999, a fact sheet was produced by the Washington County Soil and Water Conservation District(SWCD)and the Small Acreage Steering Committee. While acknowledging the minimum 35 foot buffer recommended by NRCS, this fact sheet recommends a minimum of 50 feet to achieve aquatic habitat benefit. The 35 feet of buffer is considered only sufficient to stabilize the stream bank and filter sediment. For maximum flood protection, it recommends that a buffer extending the width of the 100-year floodplain may be desirable.

Many agricultural landowners in the coastal valleys are reluctant to reduce their limited pastures by developing riparian forest buffers beyond their current width and vegetative composition. They relate stories of how their ancestors settled the coastal valleys shortly after the coast range fires of the mid-1800's and remember salmon being plentiful. Therefore, they question the science that serves to demand more sacrifice from them in the name of salmonid recovery.

To move forward in our salmon recovery efforts, it is imperative that the criteria developed for Coho recovery clearly define the riparian forest buffer requirements for the coastal streams from the headwaters down to the estuaries. The criteria should be specific and include expected widths, plant composition, etc. or provide formulas for determining site-specific management actions.

The MidCoast Watersheds Council will be happy to participate in a tour or field visits to ground-truth policy direction related to these issues over policy directions in salmon recovery in lowlands.

Wayne Hoffman
Coordinator
MidCoast Watersheds Council

To: Kevin Goodson, ODFW
From: Rosemary Furfey and Jeff Lockwood, NOAA Fisheries

Summary of Staff-to Staff Comments on
Draft Chapters of the Oregon Coast Coho Conservation Plan
June 26, 2006

We appreciate the opportunity to provide the following staff-to-staff comments on the May 6, 2006 draft chapters of the Oregon Coast Coho Conservation Plan (CCP). We recognize that this is not a complete draft, and that the state may have already intended to address many of our comments and questions in subsequent sections of the CCP. We therefore share these comments in an effort to assist the state in producing a technically sound and robust CCP. We are not analyzing the sufficiency of the proposed conservation strategies for attaining the CCP's restoration target for coastal coho, and are not responding to the State's draft conservation goals based on the TRT's draft coho viability report. The coho TRT Workgroup will provide comments on the draft viability chapter. We look forward to reviewing the remaining chapters in the CCP and participating in the next Coho Stakeholder Team meeting.

Introduction

According to the statement beginning in the last paragraph on p. 1, "Achieving this desired status goal will require significant improvements in the performance of virtually all coho populations across the ESU by:

- Increasing the amount of high-quality habitat available to juvenile coho in populations across the ESU.
- Focusing coho restoration programs on portions of the landscape most suited to overwintering juvenile coho."

We agree with these two bullets, but note that the draft conservation plan does not include information about the existing amount of high quality habitat, its location, its condition, or how much habitat of what condition is needed to achieve the goal. Nor does it include information from the CLAMS modeling and Oregon's coastal coho assessment about the location and current condition of areas with the highest intrinsic potential to provide high quality winter rearing habitat. This information is crucial to establishing a credible basis in conservation biology for the plan.

Section 7: Strategic Framework

According to the Introduction to this section (p. 20), the strategic framework is based on principles of conservation biology. It would be helpful to articulate the principles to which the authors are referring. At its most basic, conservation biology suggests protecting the highest quality existing habitat, and restoring the habitat with the highest potential to boost fish populations. What evidence can ODFW provide that focusing restoration on winter high intrinsic potential habitat, without much in the way of new protective measures, will be sufficient to boost coho productivity? What measures are

potentially available to identify and protect the most productive coho habitat that currently exists?

Under "Desired Status Goal" (p. 20), the plan states that "Achieving these benefits for current and future generations will require measures (management actions) that conserve and restore the key biologic, ecologic, and landscape processes that support the ecosystems upon which salmonid species depend. These measures may require implementation of specific habitat protection and restoration work and complementary management of harvest and hatchery programs."

- It would be useful if the plan would describe the key processes, and explain how the management actions offered relate to conserving and restoring these key processes. This could be a theme that runs throughout the plan. As written, there is no unifying set of principles, just a collection of descriptions of existing state programs, with only a few seemingly random references to ecosystem processes or functions.

Below are comments on the three strategies described in part A of this chapter (p. 20-21):

"Provide incentives to landowners to participate in non-regulatory conservations and restoration activities on private lands."

- Although we agree this should be part of the strategies, the incentives for owners of agricultural lands were not clear in the ODA chapter. Please clearly identify existing and potential new incentives.

"Maintain collaborative partnerships among state and federal agencies to assure cooperative implementation of the Oregon Plan and the Coastal Coho Conservation Plan."

- We could find no actions to implement this strategy; in fact, there are no measures for any level of government besides the state. Are these under development?

"Review effectiveness of and compliance with Oregon laws, agency rules, and non-regulatory programs intended to achieve the objectives of the Oregon Plan and Coastal Coho Conservation Plan.

- We could find no actions regarding this part of the strategy. Was the coho assessment the vehicle to accomplish this?

"Prioritize expenditures of available funds (e.g. lottery revenues, federal funds, discretionary grants, etc.) to effectively conserve and restore watershed processes that will support achievement of Oregon Plan and desired status goal for this plan."

- How will this be done? This was not clear in the conservation actions.

"Incorporate a landscape perspective into efforts to address limiting factors."

- This would be very useful, but as of this draft there is little if any reference to landscape strategies in the conservation actions, nor to limiting factors for each coho population. When will this be developed?

"Describe conservation strategies for all independent populations based on biotic, geomorphic, and cultural landscape that support each population."

- This also would be helpful, but could find no population-specific conservation strategies in this draft. When will these be developed?

"Address key limiting factors identified in the Coastal Coho Assessment as refined by local watershed assessments and action plans."

- This obviously is a key component, but there are only a few references to key limiting factors in the agency actions. When will these links be developed?

"Identify new measures to protect and restore watershed functions that contribute to highly productive coho habitat."

- We agree this is needed; however, the only new measures in the CCCP are for ODFW. Will the next draft identify needs for other new measures from other state, federal or local authorities or agencies?

"Develop conservation and restoration strategies for dependent populations.

- This is a lower priority than strategies for independent populations, but when will these strategies be developed?

Part C of this section (p. 22) states that watershed assessments have been completed for all watershed councils within the ESU, and that most councils have developed action plans. The CCP should evaluate the adequacy of those plans to address limiting factors for coho. Many watershed council assessments provide a starting point for prioritizing limiting factors and developing actions, but more time, money, and training is needed for many watershed councils to turn these documents into plans that include credible restoration strategies that are likely to be effective. This section also Page 22, Section C. The CCP states that local organizations will periodically review action plans and priorities, and place appropriate emphasis on projects that support achieving the desired status goal. How can ODFW ensure that these steps will happen, particularly when some watershed councils are under-funded and lightly staffed? Does ODFW have a schedule for taking these steps with each council?

<u>Section 8: Conservation Actions</u>

General comments: Other than the beaver initiative, the section presents descriptions of existing state programs generally without any explanation as to which specific threats and limiting factors facing each population they pertain, or about how (or whether) the measures will translate into the boost in freshwater coho productivity needed to attain the viability targets. Also, there is almost no mention of threats, and where they are mentioned, they are used incorrectly as synonyms for limiting factors (e.g., in the agriculture section). The conservation strategies listed in Section 7 need to be brought into this chapter, and conservation actions need to be tailored to fit these needs. This could be a combination of existing programs and new programs. The document needs to explain the threats and limiting factors (by coho population) prior to describing the conservation actions, explain how the actions address the threats and limiting factors at the population scale, and realistically appraise areas that need additional measures. The

CCP also needs to include measures not just for the state, but also for federal, county and local governments.

Section 8-A: Regional and ESU – Wide Conservation Actions and Policies
General comment: This section needs an overall introduction and a description of how the information is organized.

P. 23, New Action: It is unclear which agency will carry out this action, as it is not nested in agency subsections as are all the other actions. We realize, however, that this is just a placeholder for the action which ODFW has not fully developed.

P. 23: the Western Oregon Stream Restoration Program (WOSRP) is a key part of the strategy to achieve the desired status for coastal coho. The program depends on the participation of willing landowners; thus, outreach mechanisms should be presented, evaluated, and refined. Is the current outreach strategy working? How can it be improved?

P. 24, 1st full paragraph: The CCP states that one measure of success of the WOSRP is the greater demand for biologists' time. The CCP should discuss how this increasing demand will be met.

P. 24, 3rd paragraph: Please clarify what is meant by "coarse wood" in relation to large wood structures.

Section 8.2.1.3.3 Beaver
General Comments: We commend ODFW for emphasizing the importance of beaver to the recovery of coastal coho salmon. However, when comparing the types of measures proposed (p. 31-32) vs. those initiated in 1998 for the same purpose, it is not clear how the new program differs from the old program (under the Oregon Plan) that the CCP admits has not increased the occurrence of beaver dams. The CCP should include a clear analysis of the existing program's strong points, its weaknesses, and obstacles to success before proposing new measures. The CCP should include a broader range of options to improve the program, and describe how funding increases will be obtained for the expanded program.

P. 26: A lack of information about populations of beaver makes it harder to evaluate ODFW's existing and proposed programs. Please discuss any available information about the current and historical abundance, and the population structure, of beaver in the CCP area. What is the potential to restore beaver in WHIP areas? What are the goals of ODFW for restoring beaver populations, by coho population basin, what are the actions ?

P. 28: We suggest inserting a new sub-heading after the section on "Damage Related to Beaver Activity" titled "Regulatory Framework." In the Stakeholder Team meetings, Oregon state participants said that the CCP would propose legislation where necessary to restore coho. With the increased emphasis on beneficial aspects of beaver, the CCP

should discuss not only voluntary reporting measures for the killing of beaver, but also the possibility of supporting a change to the statute that defines beaver as predators and allows landowners to kill them upon discovery, without a permit. Also, the description of the proposed beaver program does not mention Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture, which also kills beaver on the Oregon coast. Is APHIS among the agencies using the "beaver habitat potential maps?" How is that affecting their activities on the coast? How will ODFW engage APHIS in the beaver initiative?

P. 29: Regarding the first full paragraph after the bullet list, it is unclear how ODFW arrived at the inference that the voluntary effort was successful in encouraging non-lethal control methods based on the results of surveys of trappers. What percentage of beaver trapping effort is accounted for by landowner requests for removal? Also, this statement seems to conflict somewhat with the statement on p. 26 that the program goal of increasing beaver dams apparently has not been reached.

Page 29-30: Please discuss the lower frequency of beaver ponds in the Umpqua River basin. Is this an artifact of geomorphology or of management? Is ODFW considering ways to increase beaver abundance in that basin? Regarding the frequency of beaver ponds throughout the CCP area, what is the goal for the frequency of beaver ponds?

P. 31, last bullet: It is unclear whether ODFW will be monitoring the occurrence of beaver dams or beaver populations, and how it will be done (sampling variables, scale, effort, etc.).

P. 31, Recommended Actions: These actions need goals to establish what constitutes success, and timelines for implementation.

Hatchery Actions
The proposed actions to further reduce coho hatchery programs in the Coquille, Coos, and North Umpqua will lessen impacts to wild coho recovery, and therefore, is an important step to address factors limiting coho recovery.

Harvest Actions
NOAA Fisheries generally supports the conceptual approach for evaluating how ODFW might proceed with some terminal wild coho fisheries in rivers where the populations are judged to be healthy. NOAA Fisheries will review any subsequent specific guidelines and criteria as they become available.

<u>Oregon Watershed Enhancement Board (OWEB)</u>
P. 50, last paragraph to p. 51, first paragraph: In discussing how funding for watershed councils has been level for 8 years with a small increase for 2005-2007, the CCP points out that funding levels have not allowed the capacity of councils to grow. Since the plan's core is engaging private landowners in restoration projects, funding of councils is critical. Level funding does not account for increasing expenses, including inflation and

the cost of implementing more projects. Please include an evaluation of the estimate of funding that will be needed for the councils to meet the CCP goals.

P. 51, paragraph 2: Funding for soil and water conservation districts (SWCD) has been maintained at parity with watershed council funding. Please explain how the demand for more staff time, technical development, and implementation monitoring from SWCD will be met without additional funding considering the new emphasis on restoration in lowland, agricultural lands where SWCD is a lead agency. Also, annual work plans are developed by SWCD in order to receive state funds and approved by ODA personnel. How well do the plans comport with the goals of the CCP? What criteria will be used by ODA to review these plans?

P. 52, paragraph 1: Please clarify if this CCP is the mechanism on the Oregon Coast to satisfy OWEB's goal of "all watersheds in the state to have restoration priorities by the end of 2006." What is the current status of this effort?

Page 52, paragraph 3: Please clarify how the money from the salmon license plates is used to address transportation impacts. Is this money used for funding ODOT FTEs, restoration projects, monitoring, or research?

P. 52, paragraph 4-5: The discussion of the three OWEB monitoring strategy efforts should discuss the inclusion of monitoring data from projects funded through OWEB's competitive grant funding process.

<u>Oregon Department of Forestry</u>

P. 64, third full paragraph: It is unclear which measure "aggressively enhances over wintering habitat." The measure involving placement of "key pieces" of large wood isn't even in effect, being still under development.

P. 65, first paragraph: This paragraph explains that riparian management actions under the riparian rules create a range of aquatic functions, and that "Over time these management actions increase the potential for large wood recruitment from upslope sources through natural disturbance events or provide wood for deliberate placement." Increase the potential relative to what, and in what categories of streams? Since no trees are required to be retained along perennial non-fish bearing streams, which can contribute 50% of the large wood to fish-bearing streams, it seems hard to argue that riparian management increases the potential for large wood relative to natural conditions.

P. 71, second full paragraph, regarding the bullet list of "blended landscape and riparian and aquatic strategies in the FMP" for the Tillamook and Clatsop state forests:

- The goal of mature forest conditions for riparian areas will help support coho recovery, but the section should explain that the 170-foot wide riparian area only applies to fish-bearing streams and large and medium non-fish bearing streams. It does not apply to small, non-fish bearing streams (which often are a majority of

the stream miles in coastal Oregon forests), which have a smaller, discontinuous buffer.

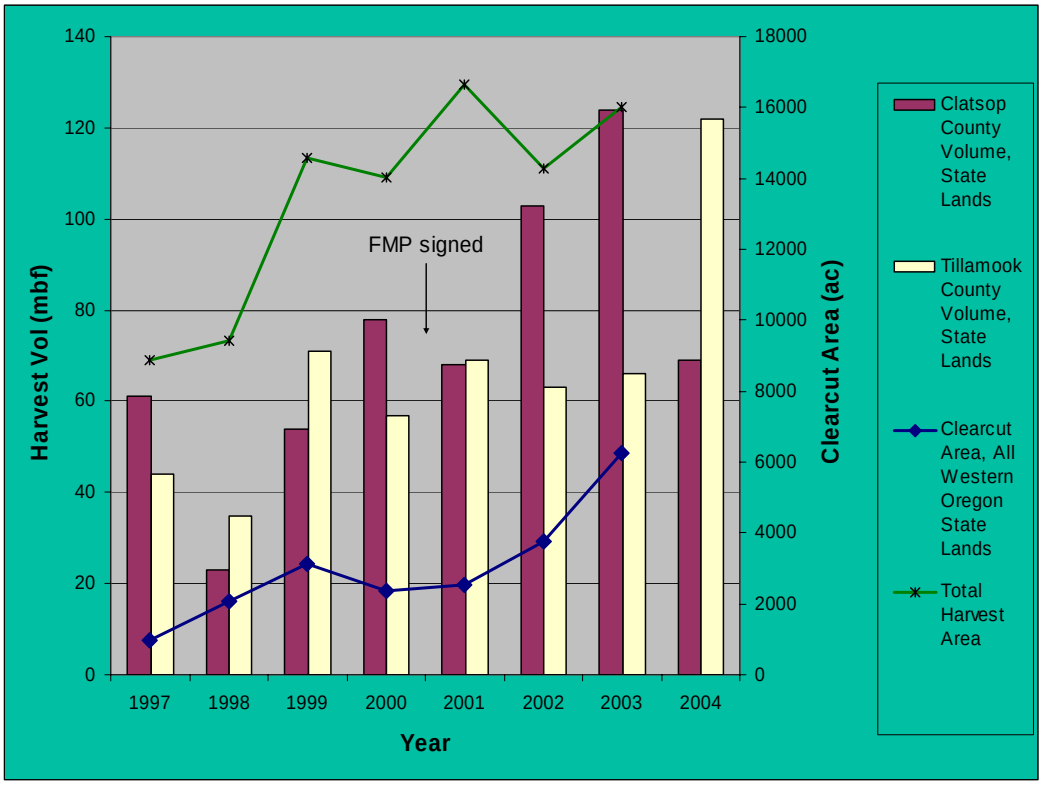
- Third bullet, "The FMP makes a commitment to leave riparian areas untouched that meet the mature forest condition," may include a bit of hyperbole. We searched the Forest Management Plan (Chapter 4, Resource Management Concepts and Strategies), and the closest thing we could find to this statement is a statement on p. 4-34 that "The goal of management along fish-bearing streams and larger non-fish-bearing streams is to grow and retain vegetation so that, over time, riparian and aquatic habitat conditions become similar to those associated with mature forest stands." P. 4-32 of the FMP state that "Certain RMAs should be managed for conditions associated with mature forests." This does not read like a firm commitment. Also, for fish-bearing streams and large and medium non-fish bearing streams, is it the entire riparian area that is left untouched after achieving mature forest condition, or just the inner 100 feet? The statement also should note that riparian areas for small, non-fish bearing streams are defined and applied under the plan differently from those of other streams, so this statement only applies to part of the ecologically-defined riparian areas for these streams.

- Fourth bullet, please state that the 170-foot wide riparian area applies to fish-bearing and large and medium non-fish bearing streams only. Regarding the wood recruitment percentages, the references are used in a somewhat misleading way, as these studies were not looking at a strategy with partial harvest allowed in the 25-100 foot zone, as is the case prior to mature forest conditions being attained in the FMP. Also, please explain that these percentages are for streamside tree stands only (i.e., they do not include wood from upstream or upslope sources).

- Fifth bullet, please explain that the "wide buffers" apply only to fish-bearing streams and large and medium non-fish bearing streams.

P. 72, paragraph on structure based management:
This section should explain how the projected targets for stand structures compare to the current distribution of stand types. It also should discuss overall trends in harvest that have accompanied implementation of the plan. Harvest rates generally have been increasing since implementation of the plan, and there are potential cumulative effects to consider from this increased level of activity (Fig. 1). Are harvest rates likely to keep increasing, and what effects might this have on coho habitat and limiting factors?

Figure 1. Timber harvest on state lands on Northern Oregon Coast, pre- and post- Forest Management Plan. Clatsop volume includes some lands outside of coastal coho ESU. Data from Oregon Department of Forestry, graphed by NOAA Fisheries, Oregon State Habitat Office.



P. 74, paragraph 3: Regarding the statement that "The Elliott State Forest Habitat Conservation Plan is currently being revised, with an anticipated public review draft in 2006. The issuance of a new ESA Incidental Take Permit (ITP) will follow soon thereafter." The statement that an ITP "will follow soon after" needs to be corrected. The current status is that a draft environmental impact statement for the HCP is being prepared. Depending on the outcomes of the NEPA process and negotiations between the Fish and Wildlife Service, National Marine Fisheries Service, and ODF, an HCP agreement may or may not be signed, and an ITP may or may not be issued (separately) by each of the agencies. It is not a certainty as the draft conservation plan indicates.

P. 74, paragraph 4: How many watershed assessments have been completed in the state forests, and how many are left to be done?

<u>Oregon Department of Agriculture (ODA)</u>
P. 76, Introduction: Regarding the following: "Addressing water pollution from agricultural activities addresses the following potential threats to Oregon Coast coho:

- Riparian condition
- Water Quality"

Riparian condition and water quality are related to limiting factors for certain coho populations, but they are not threats under the definitions agreed to by Oregon and NOAA Fisheries. Threats are human activities. Please identify the threats and limiting factors pertaining to agriculture and discuss how the state programs will address them.

P. 76: Implementation of agricultural water quality management plans (AWQMPs) to meet TMDLs is one of ODA's main programs to restore riparian areas and improve water quality. The CCP should summarize the implementation schedules for the measures included in these plans to illustrate the timeline to achieve the program's goals. Also, our understanding is that compliance with these plans is tracked only through investigations of potential violations. Does ODA have a more comprehensive system to track compliance?

P. 77, Voluntary water quality farm plans are another ODA tool for improving riparian areas and water quality. What is the status of these voluntary plans? For what percentage of the agricultural lands within the range of coho have the plans been finished? What are the incentives for landowners to create these plans? How is the success of these plans being measured? What is the outreach strategy to engage landowners and encourage them to complete these plans?

P. 78, Implementation of Agricultural Water Quality Management Plans: What timeline has ODA set for reaching the stated goal of 100% compliance of landowners with AWQMPs? What is the current level of compliance?

P. 78, Biennial Reviews: Where is ODA in its biennial review cycle? Also, please provide a summary of the information that demonstrates a "large amount of relevant activity and indicated that no changes are needed to address rule or implementation deficiencies".

P. 79, Monitoring: Please reconcile the statement "TMDLs and SB1010 plans and rules completed in the Oregon Coast ESU have only recently been finished and implementation is just getting started. As a result there has not been enough time to assess effectiveness" with the statement noted above for p. 78 that makes a more definitive statement. Also, please explain the rationale for analyzing 20 percent of the stream miles in each basin. Is this based on funding limitations, the distribution of agricultural lands, or some other factor? What does the 20 percent of stream miles mean with respect to the amount of coverage of WHIP coho streams?

<u>Oregon Water Resources Department (WRD)</u>

P. 82, Water Rights Management: How significant is the issue that "instream water rights do not guarantee minimum stream flows in stream reaches"? The coho assessment indicated that stream flow was a limiting factor in some watersheds, and the Stakeholder Team identified other areas with localized problems, yet this problem is not mentioned in this section of the CCP.

P. 83, Please characterize the success of WRD's stream flow restoration programs with respect to the needs of coho salmon. A total of 25 cubic feet second^{-1} restored does not seem like much for the entire range of the coho.

Section 10: Research, Monitoring, and Adaptive Management

P. 90, Introduction: The draft plan identifies three things an RME section should accomplish. This chapter, however, only identifies RME needs and recommendations, not the methods and actions to achieve the three goals of an RME plan. It is recommended that this chapter begin with an introduction that describes the State's analytic framework for conducting RME, and how the individual agency and overall State monitoring and adaptive management actions will be coordinated. The chapter should identify what each agency will do for RM&E and reference the information for each agency. This chapter should identify the next step actions that need to be carried out to develop a comprehensive RME program for coho recovery. It is recommended that the State review NOAA's new RME Guidance as this chapter is completed and the CCP RME plan is developed.

P. 90; RME Need No. 1: The RME needs should identify the lead agency, scope of the task and any key issues or obstacles that may need to be addressed. If this is an important issue, how is the need to research summer habitat conditions addressed as an action in the draft conservation plan? This section needs to identify follow-up actions and next steps.

P. 90; RME Need No. 2: What agency will be the lead to coordinate effectiveness monitoring? When reviewing the State of Washington's monitoring strategy, what are the implications for applying this approach in Oregon?

P. 91; RME Need No. 3: Identify lead agency and next step actions to carry out this need.

P. 91; RME No. 4: Identify which Department is referenced to in this need. Identify lead agency and next step actions to carry out this need.

P. 92; RME No. 6: How will the information collected through this research be used to modify or expand ODFW's existing program proposed in the draft plan?

Finally, how will the RME plan address climate change and its impact on coho salmon? How will agency programs be modified based on these RME findings?

Wayne Giesy
Po Box 772
Philomath OR 97370

June 11, 2006

Re: 1st Draft of Coho Conservation Plan

I feel we only have a six-year window to show good results for improving Coho population.

The draft needs immediate action on the ground and should include a program for small and medium streams to enlist the voluntary help of landowners to donate up to three logs (the right length and diameter) for each on half mile of stream. Since over wintering habitat is a major limiting factor, this would give prompt positive results.

The program would require ODFW to identify the location to place the log and for those who cannot afford the placement cost, require NOAA to pay the placement cost. In as many situations as possible, push the tree over, leaving the root wad to hold the log in place.

In addition we need to provide for immediate action to greatly expand our hatchery program. Ask fishermen to catch natural spawned males and females for the broodstock. (this program has been successful at the North Fork Alsea Hatchery for Steehead.) Seta goal to replace at least 3 million Coho smolt next year and increase the numbers as science from the Hatchery Research Center is available.

In some of our streams and rivers, extremely large boulders would give better results that logs.

The sport and commercial fishermen need the help to keep the industry from dying. Oregon needs jobs to help our economy.

Many in the timer industry would again offer their cooperation and I have visited with my Farmer friends and they are prepared to assist along the farming areas via Senate Bill 1010.

Results are what counts.

Wayne Giesy