Summer Chum Salmon Conservation Initiative

An Implementation Plan to Recover Summer Chum in the Hood Canal and Strait of Juan de Fuca Region

Supplemental Report No. 2

Public Review Comments On Draft Habitat Sections Of The Summer Chum Salmon Conservation Initiative

Point No Point Treaty Tribes
Washington Department of Fish and Wildlife

April 2000

REPORT AVAILABILITY

In compliance with the federal Americans with Disabilities Act, this publication is available in alternate formats to accommodate individuals with disabilities. Please contact (360) 902-2700 or TDD (360) 902-2207, or write to:

Department of Fish and Wildlife
600 Capitol Way North
Olympia, Washington 98501-1091

Public Review Comments on Draft Habitat Sections of The Summer Chum Salmon Conservation Initiative

The Point No Point Treaty (PNPT) Tribes and Washington Department of Fish and Wildlife (WDFW) published a comprehensive salmon recovery plan titled "Summer Chum Salmon Conservation Initiative - An Implementation Plan to Recover Summer Chum in the Hood Canal and Strait of Juan de Fuca Region" in April of 2000. During the late winter of 1999, a draft of the habitat sections being prepared for inclusion in the plan (section 3.4, and Appendix Reports 3.5-3.8) underwent external review by independent scientists, state agencies, local jurisdictions, and members of the public. The draft was distributed through the Hood Canal Coordinating Council, a coalition of regional Tribal and county governments. The PNPT Tribes and WDFW biologists that wrote the plan then reviewed these comments and revised the plan. This process allowed the authors to improve the plan, based on the strong feedback and critical review they received.

Written comments on the plan were submitted by approximately thirty different individuals, organizations, or agencies. Representatives of city and county governments, utility and conservation districts, private corporations, environmental groups, tribes, and individual citizens participated in this review. The breadth of comments makes generalizations difficult. However, many of the comments were quite detailed and focused on elements of the plan that needed clarification. In several instances, comments stimulated discussion among the authors that led to reevaluation of assumptions, methodologies, and protection/restoration strategies.

Most comments focused on Section 3.4.4, the Tool Kit of Protection and Restoration Strategies. There were also many comments on individual watershed narratives (Appendix Report 3.6). The detailed comments on particular watersheds proved helpful, highlighting gaps in our knowledge and drawing attention to additional pertinent data. The comments received are provided here as a supplement to the overall plan.

Subject: Comments on Draft Summer Chum Recovery Plan
Date: Thu, 25 Feb 1999 11:09:53 -0800
From: "Barreca, Jeannette" <JBAR461@ECY.WA.GOV>
To: "Byron Rot (E-mail)" <Brot@nwifc.wa.gov>
CC: "Nelson, Cynthia" <cyne461@ECY.WA.GOV>

Congratulations for completing the peer review draft of the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan!

I focused my review on sections that referenced Ecology, and only glanced at the rest. By the way, my agency avoids the acronym "DOE" so as not to be confused with the federal Department of Energy.

I gave Cynthia Nelson (407-0276) a few pages to review, starting on page 19. Here are her comments:

Jeannette - I do have one comment on the protection section for low flows. Because Ecology does not presently regulate, for the most part, well drilling under the ground water exemption, RCW 90.44.050, the potential exists for unregulated small wells to impact surface water flows. In some areas this is less of a problem than others. I suspect it could be a problem for small streams in the Hood Canal area. I would like the plan writers to know that merely instructing Ecology to identify hydraulic continuity and to limit withdrawals consistent with flow recommendations doesn't necessarily reach the point I think they might want to get to. However, when combined with the previous section about adopting instream flows by rule, that process should have dealt with it and my concern may be moot by then. Perhaps this plan should say that local governments should address development of exempt wells potentially in continuity with salmon streams through restrictions on building permits, or some other ordinances.

Found a typo in the Water Quality paragraph, mid way through - "potential climate changes pose" ...

I think under the Water Quality section A. Protection Strategies, I have the same comment as above. #2 says "prohibit additional surface and ground water extraction"... probably needs to have collaborative action between county and Ecology to address the ground water exemption.

Also - under Restoration Options, I'd suggest changing the last part of the line to say "pursue forfeited or abandoned rights for relinquishment" rather than "for public acquisition", since unused water rights are no longer property rights.

Another typo or wording suggestion for B. Toxics - Under #1, Protection strategies, say "Prohibit...waste sites...from locating in" instead of "to locate in".

thanks for the opportunity to comment on excerpts of the draft. It looks really well written.

Cynthia

Starting on page 22, I had some comments:

I'm not sure what the definition of riparian forest is - is it the forested buffer? Maybe you could insert the word "buffer" after "riparian forest" in the septic system protection strategy. References to the buffer sometimes mention 250' minimum (e.g. p. 21, 25) but there is at least one reference (p. 23) to a variable buffer (150-250'). Is this based on whether the stream is fish-bearing or not (is 150' the site potential tree-height in the summer chum ESU)?

On page 22, in restoration strategy 3, I'd clarify that you don't intend for animal exclusion fences to be constructed "adjacent to streams." You may want to specify a distance from the stream for the animal exclusion fence, consistent with CREP.

At the bottom of p. 22, Protection Strategy 2 (LWD) - add DNR to the list of agencies with the authority to "manage" LWD. The Forest Practices Act prohibits (or at least restricts) removing it from streams. I checked into Ecology's authority - if a federal permit is necessary, Ecology has some authority under the 401 certification process to manage LWD. In addition to counties, municipalities can regulate LWD under their Shoreline Master Programs.

I am still waiting for comments from our Shorelands program regarding nearshore habitat/SMA issues.

At the bottom of page 38, you might note that tribes have regulatory jurisdiction on tribal lands.

At the bottom of Table 6 on p. 38, add local governments as having jurisdiction under SEPA (in fact they have primary authority).

In the Table of Contents, II.C. was italicized., and Appendix C. has "summary" misspelled.

On page 10, under Subestuarine assessment, change "effect" to "affect."

On page 12, second-to-last paragraph, make seventh sentence plural: "were" and "Rivers."

(a colon is accidentally underlined on p. 23, Sediment, problem statement)

Thanks for the opportunity to comment; I'll get back to you with any additional comments. Jeannette Barreca 407-6556

Subject: Summer Chum habitat recovery plan-habitat section
Date: Fri, 26 Feb 1999 10:57:21 -0500
From: Brian_Winter@nps.gov (Brian Winter)
To: Brot@nwifc.wa.gov

Byron:

Following are my comments on the above.

Page 17: I do not believe that "a stable channel bed" via placement of large woody debris is an appropriate goal. You can also provide stability via bank armoring, but a dynamic, changing system is what these fish evolved it. It would be better if the goal was to restore natural ecosystem processes, physical and biological. In addition, restoration of eelgrass beds may have to be an active measure, as opposed to simply allowing them to occur.

Page 19: Reference to establishing minimum instream flow levels is incomplete without clearly stating that flow levels should be sufficient to maintain natural and physical ecosystem processes. Too often flows are set based on minimally acceptable criteria (i.e., depth, velocity, substrate/cover) for fish life stages (i.e., incubation, spawning, rearing). That standard is inadequate.

Page 27: The State of Oregon has a stronger standard that does not allow for the construction of bulkheads, even when an existing home is threatened. Low interest bank loans for relocation or reconstruction could be made available in lieu of absolute guarantees that homeowners can protect their homes even when, perhaps, the home should not have been built there in the first place.

Bulkheads, if extending into the Canal far enough, can become migration barriers for juvenile chum as they migrate along the shoreline. In the least, the bulkheads may provide opportunities for increased predation on the juvenile chum by forcing them into deeper water during their migration to the Strait. In these cases, purchase of shorelines or other "compensatory mitigation" may not be adequate. Unobstructed juvenile migration must be provided in all cases, no exceptions.

Page 32: It seems that periodic air photos are needed to monitor the habitat, including impervious surfaces. This should be a specific recommendation/requirement of the plan.

I'm very uncomfortable with the apparent emphasis on low flow monitoring. It implies that summer low flow is the biggest flow problem. It's not. Monitoring of ecosystem-based flows should be done throughout the year.

I hope these comments are helpful.

Brian

Subject: Review comments on draft HCESJFSCRPHS
Date: Mon, 1 Mar 1999 14:40:48 -0800 (PST)
From: Charles Simenstad <simenstd@u.washington.edu>
To: Chris Weller <cweller@silverlink.net>, Carol Bernthal <pnphab@silverlink.net>, Brot@nwifc.wa.gov

Chris et al.,
With limited time available, I just did a quick read-through the DRAFT Plan that you sent out for peer review. This draft seems quite comprehensive and complete, and definitely "pithy!" I think that there is a lot of material to digest, and strongly recommend an "Executive Summary" at the front end to facilitate consumption by decision-makers that won't tolerate more than two pages of text. Also, what about a "synthesis" figure that shows (by shading?) watersheds, subestuaries and nearshore segments of highest priority protection and restoration?
Also, I noticed in the Skokomish Watershed Narrative that the Simenstad (1996) citation in the References section should be the following: "Jay, D. A., and C. A. Simenstad. 1996. Downstream effects of water withdrawl in a small, West Coast river basin: erosion and deposition on the Skokomish River delta. Estuaries 19: 501-517." It might also benefit the "Estuarine alterations" bullet section on the previous page to incorporate and cite the information presented in that paper? Also, shouldn't the pages in Appendix B be numbered?
Cheers,
Si

****
Charles ("Si") Simenstad; Coordinator, WETLAND ECOSYSTEM TEAM
School of Fisheries, Box 357980, University of Washington
Seattle, WA 98195-7980 USA Voice: 1-206-543-7185 FAX: 1-206-685-7471
E-mail: simenstd@u.washington.edu
WET WWW URL: http://www.fish.washington.edu/research/wet/WET.html
CRETM-LMER URL: http://weber.u.washington.edu/~cretmweb/CRETM.html
Si's WWW URL: http://www.fish.washington.edu/people/simenstd/
****

PROTECT
THE
PENINSULA'S
FUTURE

P.O. Box 1677
Sequim, WA 98382

April 24, 1999
Hood Canal Coordinating Council
Limiting Factors Comments
P.O. Box 5002
Quilcene, WA 98376

Re: Hood Canal/Eastern Straits of Juan de Fuca Summer Chum Habitat Recovery Plan, Final Draft, March 23, 1999

Dear Council:

I expect you will receive a buzz saw of complaints because this plan really does address problems in a way that has a chance of recovering the salmon, and it conflicts with the business as usual which has been historically taken as a right by those who would gain thereby.

Well I need to remind you that there exists a large constituency dedicated to salmon recovery even apart from the legal necessity to recover endangered species.

In January, 1998 a professional polling firm surveyed 500 Washington residents and found: 70% said it is extremely or very important that wild salmon be restored in Washington; 80% said one of the most effective means to this end is "Protection of natural salmon habitat by restricting harmful industrial, agricultural, and forestry practices in stream side and shoreline areas". Over 80% agreed: "The unique quality of Washington's environment is critical to our state's economic health, attracting new businesses, such as high tech industry, and creating new jobs.". The importance of restoring wild salmon was endorsed by 84% of (self-characterized) liberals, 65% of moderates, and 68% of conservatives. (Reported in "Voices", Washington Environmental Council, Spring, 1998 page 3)

In 1996 a poll conducted by WDFW with random survey of 801 Washington residents, 86% agreed that hunting, fishing or non-consumptive wildlife activity is an important part of their life, 50% rated decline in fish/wildlife over the past 20 years as severe or extreme, and 75% rated loss of habitat as very important to the decline. To remedy this situation, three quarters said they would support an annual tax increase of $100 or less and two-thirds would support an increase of $200.

The chief executive officers of Oregon's largest companies form the Oregon Business Council. Their executive Director, Duncan Wyse, says: "Healthy salmon are a sign of a robust, livable business climate". His organization endorsed saving salmon two years ago "...Companies locate

in the Northwest mainly because it has a reputation as a wholesome place to live and work. Lose the wild salmon, and Oregon's livable reputation is damaged as well." Economist Hans Radke calculated that as of 1996, decline in fisheries cost 25,000 family-wage jobs, and about $500 million earning power in the Columbia River Basin communities alone. In the Klamath Basin, 1600 jobs have gone, along with annual income of up to $32 million/year. (See" Salmon in Oregon", publ. by State Univ. Extension Service, Oregon State Univ. 1998)

As to specifics of the Recovery Plan we are particularly pleased with the attention given to recovery of the estuaries and the opinion that the species cannot recover if this receiving area for the just-hatched fry is not a safe place for them to be. We are interested not only in the physical aspects of the recovery plan: bulkhead and pier/dock removals, e.g. but also think some attention needs to be paid to toxic materials such as shore side uses of pesticides, creosote, and engine oil as it escapes from marine motors. Phasing out the less efficient motors or limiting their use in critical areas would seem prudent.

Regarding the Dungeness River and fecal coliforms, the need we think is less for "monitoring" than for remediation of the blatant sources of fecals already identified on agricultural sites and a zoo. A call simply for more monitoring serves only as a delaying tactic in this case.

Please send us copies of comments and replies. We would like to be kept informed. We are also one of your step-children: Protect the Peninsula's Future participates on the Jefferson Water Resources Council through its membership in Olympic Environmental Council.

Yours truly,

Eloise Kailin
President, PPF

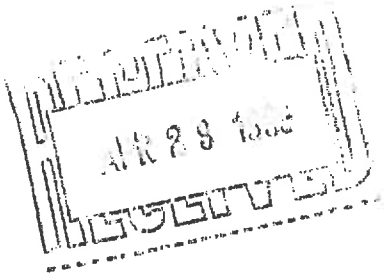
file c:\ek\hoodcnl.wpd

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Western Washington Office
Aquatic Resources Division
510 Desmond Drive SE., Suite 102
Lacey, Washington 98503
telephone (360) 753-9440 fax (360) 753-9407

IN REPLY REFER TO:



April 27, 1999

Donna Simmons
Hood Canal Coordinating Council
295142 Highway 101
P.O. Box 5002
Quilcene, Washington 98376

Dear Donna:

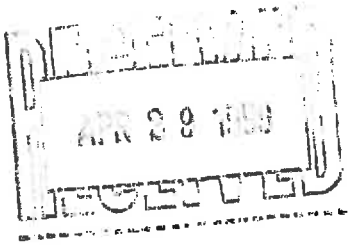
We have one additional change to suggest to the "Summer Chum Habitat Recovery Plan". Page B-25, second para, fifth sentence, should read; This water is removed from the Big Quilcene for about ***700 yards*** between the ***lower*** hatchery intake and outlet.

Sincerely,

Dave

Dave Zajac

PORT TOWNSEND PAPER CORPORATION
PO BOX 3170
PORT TOWNSEND, WA 98368
(360) 385-3170
FAX (360) 385-0355



April 27, 1999

Limiting Factors Comments
Hood Canal Coordinating Council
PO Box 5002
Quilcene, WA. 98376-5002

Re: Hood Canal/Eastern Strait of Juan de Fuca
Summer Chum Habitat Recovery Plan

Dear Ladies and Gentlemen:

Port Townsend Paper Corp. has received a copy of the Habitat Recovery Plan Final Draft. As one of the primary water consumers related to diversions on both the Little Quilcene and Big Quilcene Rivers and as the operator of the related Olympic Gravity Water System (OGWS) water works, we would appreciate the opportunity to comment as follows:

1. We at PTPC appreciate the work that this document represents. The drafters have provided a very comprehensive plan.
2. Based on certain knowledge and recent studies conducted, PTPC believes that in rating the factors for decline and habitat degradation for the Big and Little Quilcene Rivers certain considerations should be given;

    - On the Little Quilcene River, very little if any diversion of water for the OGWS takes place from the first part of September until the first major rains in the fall. In 1998 the first diversion of water after the September shutdown took place in the middle of November. During this period, the river is usually running below the minimum instream flow requirement (6 CFS) at the point of diversion. When the first rains come, they are usually rather sporadic events with large quantities of rain for short periods that spike the river flow. There is normally little usable water during these events due to turbidity. Significant diversions are not practical until the soil saturates and the run-off becomes less volatile with incidents of rainfall.

    - Also on the Little Quilcene River, it is important knowledge that after Lords Lake fills in the spring (usually April or May), the water that is diverted until the September shut-off passes through the lake and is returned to the Little Quilcene via Howe Creek. Lords Lake is normally not utilized for consumption until the Big Quilcene river flow declines to the minimum agreed-to instream flow. The Little Quilcene drops below minimum instream flow before the Big Quilcene does.

- In 1998 a study group including most of the interested parties was organized to meet at the fish hatchery for the Big Quilcene River. The purpose of the study was to monitor the effect of the seasonal declining flow in the river on the areas frequented for spawning by the salmon. PTPC participated and provided flow data as the season progressed. Others gaged the pools and reds for correlation. The river flow at the point of diversion was not allowed to fall below an agreed to (27) CFS for the study. The interesting result from the study was that the gaged levels in the areas of interest did not show a significant drop in pool depth as the river declined from 37 CFS on 9/3/98 at the point of diversion to the 27 CFS on 9/19/98. Also there was no evidence of reds that had been established at the higher flows being left above the pool levels.

3. PTPC would appreciate the authors taking this information into consideration when rating the factors for decline in order of priority. Flow of course is very important, but up to the present it could be argued that the channel conditions are the controlling factors given the natural ability of the related watersheds to supply water with or without the current withdrawals for the OGWS.

Thank you for your consideration and for all the work and concern that this document represents. If there are any questions related to our comments, please feel free to call us at (360) 385-3170 or directly to Stan Cupp at (360) 379-2060.

Sincerely,

Stan Cupp

Plant Engineer

Cc: John Begley
Dave Hartley

HAMA HAMA COMPANY

N. 35959 Highway 101
Lilliwaup. Washington 98555

4-28-99

Regarding the Habitat Recovery Plan for Hood Canal Summer Chum drafted March 99 by the WDFW and the Tribes:

This document has furthered my education about the habitat needs of Summer Chum and other salmon. I understand better than ever the negative impacts of river bank armoring, creating over-simplified channels with too little LWD; diking in the estuary, thus restricting access to marsh channels and etc. etc.

But may I raise one small point regarding your conclusions under "Factors for decline". For those rivers with which I am familiar (Dose, Duc, And Hama Hama), you detail the same list of people related habitat problems, most of which have been in place for many decades. For instance, by far the heaviest logging in these valleys occurred in the teens and 20's, both railroad and splashdams. Highway 101 was built along Hood Canal at about that same time. Riverbank armoring and diking was most heavily done in the 40's ,50's, and 60's. No big changes took place in the 60's and 70's. Yet the fish count numbers uniformly show salmon and steelhead runs going into steep decline in the late 70's, regardless of whether their river still had decent habitat or not.

It seems fairly obvious that one needs to look at other things that happened in the early 70's. Both the Marine Mammal Protection Act and the Boldt Decision come to mind. Seal numbers started to increase at the alarming rate of 14% per year. And nets in Hood Canal: where I had never before seen them as a youth, now they became common, all summer and fall, along the shorelines, and in the mouths of most rivers. (Not to mention huge open ocean drift nets combined with superior fish finding techniques.)

Coincidence with the decline? Hardly: in fact, these salmon have adapted for millennia to drastically changing spawning areas as these rivers carved their routes since the last ice age. But they cannot adapt at all to a gill net.

I realize that this first document is supposed to only deal with Habitat, and that it is only part of the final package. I just want to suggest how you might weigh the four H's. Since this river had no Hydro, and very little effect from Hatchery (since there was a no planting philosophy here for a long time), and the Habitat is still decent enough to support good runs, that pretty much leaves Harvest. A portion of the problem also belongs to the seals, and also to some open ocean conditions not yet fully understood.

We are as committed as anyone to the recovery of the salmon, and will work to keep this rivers spawning habitat in good condition, improving it where possible.

David Robbins

Hama Hama Co.

City of Port Townsend

Office of the City Manager
540 Water Street, Port Townsend, WA 98368
360/385-3000 FAX 360/385-4290

CITY OF PORT TOWNSEND

April 29, 1999

Limiting Factors Comments
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA. 98376-5002

Dear Ladies and Gentlemen:

The City of Port Townsend appreciates this opportunity to comment on the final draft of the Hood Canal/Eastern Straits of Juan de Fuca Summer Chum Habitat Recovery Plan (Recovery Plan). This information has been reviewed in detail by the Council Public Works Committee and staff. For the most part we feel that this report is well done and does focus and educate all on the issues and concerns of habitat. This document obviously will be a critical part of devising a strategy for ultimate recovery of this threatened species. While the City withdraws water for human and industrial usage from the Big and Little Quilcene Rivers, the City also recognizes the importance of salmon to this region. The following comments are therefore intended to provide input that considers the complexity of the situation.

1. For Jefferson County there is somewhere around $1,000,000 in grant funds that are being made available through 2514, 2496 and the SWPSESA Subregion. These monies are to be used for planning, organizing, studying, analyzing and data collecting related to salmon. Unfortunately these funds are funneled through different organizations that are composed of different memberships. There is a real possibility that this situation will lead to duplication of effort, lack of coordination and possible waste of resources. The Recovery Plan should include a section in the opening comments that discusses the intent of each of these funding sources and planned projects where that is known. The report should also encourage coordination to the maximum extent possible so that we can get the "biggest bang for the buck".

2. (Page 1, paragraph 1)

Thus, only by protecting and restoring their habitats will recovery of summer chum be guaranteed.

Recognizing that there are many factors that are influencing the recovery of the summer chum, it is recommended that the above sentence be changed to: "Protection and restoration of habitat is an indispensable part in the overall recovery of summer chum."

3. (Page 3, Freshwater Processes and Functions Important to Summer chum)

Survival of freshwater life history stages are linked to a number of habitat parameters including water quality (low and peak flows), water quality (primarily temperature),...

a. Change to - .....habitat parameters including, where pertinent, water quality...

b. Dissolved oxygen and chemical contamination should also be included as water quality issues. Increasing development within watersheds often results in increased use of pesticides, herbicides and increased nutrient loading.

4. (Page 9)
Fine sediment

a. Under impacts to channel processes add - "compaction/cementing of gravel beds," affecting spawning life stage.

Channel instability - Increased substrate mobility resulting in redd scour/entombment

b. Add - "de-watering of redds."

Riparian condition

c. Add - "reduced channel stability."

Floodplain and wetland loss

d. Change to - "May concentrate flood flows in the main channel"

e. Add - "loss of side channels"

Fish passage and access

f. Change to - "Unconstrained in-channel structures may obstruct..."

Estuarine habitat loss/modification

g. Change to "...and solid road causeways..."

Nearshore habitat loss/modification

h. Change to - "Bulkheads may eliminate..."

5. (Page 19, Restoration options, paragraph 1)

To potentially address flow conditions on some streams, increased off stream water storage should be considered as an option.

6. (Page 19, Low Flow)

a. By continuing to adjust the withdrawals to maintain a minimum instream flow, the operation of the municipal diversion works to stabilize the area available for spawning. Instead of the water levels continuing to drop, the redds remain wetted. There has been a cooperative effort in the Big Quilcene watershed, especially in 1998, amongst the City, Quilcene National Fish Hatchery, Port Townsend Paper Company, the Tribes, and Jefferson Soil Conservation Service to reduce water withdrawals and monitor stream flows for passage and spawning availability and redd condition as related to stream flow. This can be used as a model for other watersheds.

b. Some critical watersheds could benefit from computer modeling of the watershed system. In watersheds where there are water withdrawals, it would assist in better management of off-stream storage, to reduce withdrawals during low flow periods, and in predictive modeling of activities. The City believes that such an investment would be beneficial on both the Big and Little Quilcene Rivers. Such a model could be prohibitively expensive, however so it may be possible to only define parameters and data needs now for a future model.

7. (Page 20, Protection Strategies, 2.)

... *establishing low zoning densities...*

Low zoning densities have been established in rural areas by GMA but lowering the zoning densities in designated urban areas is not consistent with GMA.

8. (Page 21, Protection Strategies, 1)

As an alternative, consider allowing and requiring appropriate containment procedures for such businesses.

9. (Page 22)

(C. Nutrient, Objective)

a. Add-"and waste water treatment facilities.".

(C. Nutrient, Protection Strategies, 4)

b. Landfills need to meet EPA requirements wherever they are located.

(C. Nutrient, Restoration Options)

c. Add - "5. Replace failing septic systems."

10. (Page 24, paragraph 1)

The capacity to route sediment is decreased by...

a. Change route to "store"

(Protection strategies, 2)

b. Add - "and maintenance of existing roads and culverts."

(Restoration options, 1)

Reroute road drainage away from stream channels into stable receiving areas such as the forest floor.

c. A stable forest floor is usually not an option and will likely increase erosion within the forest. Drainage should be routed to holding ponds or swales if trying to capture sediments and contaminants.

(Restoration options, 2)

d. The Olympic National Forest, working with the City, has decommissioned several roads in the National Forest which have included segments in the municipal watershed. One of the things we have learned about these projects is that timing of the decommissioning is crucial, especially the revegetation portion of the project. Due to possible disturbance of nesting threatened/endangered species, road work was not possible until September, which often did not allow for adequate revegetation prior to the heavy winter rains. This can result in significant erosion and a resultant substantial sediment loading in the streams. Appropriate mention should be made of this potential problem.

11. (Page 25, Riparian Forests, objective)

a. Change to - .....protection of the stream network should be "evaluated".

(Page 26, Restoration Options, 3.)

Silvicultural treatments should not occur within the first 50 feet of the riparian buffer, or throughout the channel migration zone or 100-year floodplain.

It is recommended that this statement be deleted as there may be times silvicultural treatments are appropriate for these areas, such as removing an invasive species. It is very appropriate that such treatments should be minimized, and only if absolutely necessary, carried out in a very controlled method that keeps chemicals from reaching water areas.

12. (Page 27, 2 Subestuarine Habitat, Protection Strategies)

Change this to investigate or establish criteria for ditching, dike and solid road causeway construction...

13. (Page 28 Nearshore Habitat, Protection strategy #3)

a. Pressure treated wood may be used if environmentally acceptable.

b. The city agrees with the concept, but feels that the specifics are not supported by science. Further basis for evaluating bluffs should be developed.

(Page 28 Nearshore Habitat Restoration Strategy #2)

c. It should be noted that older structures may have little environmental impact and could even be beneficial. Removal could be more damaging than leaving the structure. Removal should not be based on "need".

(Restoration Strategy #3)

d. This statement could have far reaching impacts and should be qualified with the need to develop criteria for when this should happen.

14. (Page 32)

(Involvement of Diverse Entities)

a. Add - local

b. Acceptable protocol and basis for those protocols should be outlined.

(Table 5, Peak/Low Flows)

c. The City recommends that watershed modeling be incorporated as discussed in 6.b.

(Table 5, low flow, 3)

d. Monitoring should also include a stream profile that measures wetted area as related to streamflow to determine minimum flows for fish passage and amount of spawning area available.

(Table 5, Channel complexity/floodplain)

e. Add - ... for the appropriate channel, forest, and watershed type.

f. #8 - what accuracy is desired in channel cross-sections

(Table 5, Nearshore Habitat, #17)

g. What is really desired in this question?

(Page 34)

a. Standardized sampling protocols and surveys for the assessment of estuarine function is a crucial need.

b. Multi-scenario analysis of full buildout is somewhat addressed in GMA plans. Impacts will involve a very expensive study and should be a follow up to other research and monitoring.

15. (Page 37, Local governments, PUD's)

a. The issues of land use, stormwater, shoreline management plans, wastewater treatment, and water use are obviously critical if Summer Chum are to recover. We believe that the report should expand upon these topics.

b. City utilities and other water purveyors should also be involved with the PUD in future water planning.

c. State agencies: Department of Community, Trade and Economic Development (DCTED) should be added for their role in GMA Comprehensive Planning.

16. (Page 40 Table 6)

The Table should include a reference to the Trust Water Rights provision administered by DOE.

17. As a general statement, a lot more research appears to be needed on the life cycle of Salmon for there to be a reasonable chance of recovery. Especially important may be the need to conduct biomonitoring of the waters, both in Puget Sound and in the rivers to determine the impact of toxicity to salmon by organisms and predatory impacts.

18. (Page B-18)

Any future possible designation of the Port Hadlock, Irondale, Chimacum area as an Urban Growth Area (UGA) should consider the impact upon Chimacum Creek, the nearshore area and the estuary.

19. (Page B-20, strength of Evaluation and Information Needs, 4)

A stream gage is in place on Chimacum Creek below Chimacum. It has been operated by the City of Port Townsend and the Jefferson Soil Conservation Service since Dec. 1997.

20. (Page B-21)

a. Replace Dosewallips with "Dungeness".

b. The paragraph should mention that the City also has a 6.0 CFS minimum instream flow requirement on the Little Quilcene River and that there is a senior irrigation water right to the City's for approximately 5 cfs by landowners in Quilcene.

(Factors for Decline)

c. The City would like to see the documentation that shows that water withdrawals are the most important factor in decline of the salmon. See 21 below.

21. (Page B-22, factors for Recovery, Low flow)

a. The City of Port Townsend has a 6 cfs minimum instream flow requirement for its water right on the Little Quilcene river. This usually restricts the City's water withdrawals from July until November due to low river flows. From May until August, Lords Lake is usually full and the small amount of water that is taken to freshen the Lake is returned to the Little Quilcene River via Howe Creek, above the summer chum spawning areas. Between late August and October there are often no withdrawals due to flows of less than 6 cfs, thus the municipal diversion's impact on instream flows during the spawning phases of the chum salmon are minimized.

b. Maintenance of the municipal watershed in the National Forest has also benefitted salmon by limiting logging, increased efforts to obliterate unnecessary roads, limiting development and increased cooperation between the forest Service and other agencies to protect water quality. This applies to the Big Quilcene watershed as well.

(Page B-23, Strength of Evaluation and Information Needs, #1)

This should be changed to - determine and analyze actual Little Quilcene low river flows and determine if those flows do or do not support spawning, and, if they do support spawning, how well do those flows support spawning.

22. (Page B-25. Paragraph 1)

a. The City's water right is for 30 cfs. However, the average daily diversion is typically 22.5 - 24 cfs.

The water also supports the operation of a paper mill.

b. The City's water is used beneficially for the paper mill and City needs, with present usage by the City being on the order of 6 - 15%.

(Paragraph 2)

This water is removed from the Big Quilcene for about 150 yds. Between the hatchery intake and outlet.

a. The actual distance between the hatchery intake and the point where water is returned to the river is approximately ½ mile.

b. From July 1 - Feb. 28 (29) the Hatchery's minimum instream flow requirement is 50 cfs, from March 1 - June 30 the minimum instream flow requirement is 83 cfs.

23. (Page B-26, Paragraph 1)

The City disagrees that water withdrawal is the most critical factor for salmon in the watershed. The City has withdrawn water from the Big Quilcene River for more than 70 years and it was not until 1956 that additional water was available for municipal/industrial use from the Little Quilcene River and Lords Lake. Only until recently, through a combination of other factors such as the drastic changes to the river channel that reduced spawning area, impeded migration passage and reduced cover, have salmon stocks plummeted. Historical documentation should be included in this section and a scientific basis for this statement should be provided.

24. (Page B-27)

(Sediment aggradation)

a. Another cause of road failures and subsequent sediment aggradation is limited maintenance for roads and culverts, especially in the upper watershed.

(Factors of Recovery)

b. The IFIM may assist in understanding water flow and salmon, but the 1998 analysis should be mentioned as a crucial link in providing this knowledge. The City believes that a watershed model or data collection for a watershed model would go a long way toward allowing better management of the water resources, thus assisting in the salmon's recovery.

c. There should be more discussion about the fish hatchery captive brood stock program that may be a critical factor in Summer Chum recovery. The City believes that this program should be analyzed further and considered for high prioritization and continued funding.

25. (Page C-4)

Riparian land use rating

Are the land-use ratings only for riparian areas that chum salmon are utilizing or does it include the upper watershed as well? If the former, the numbers used for no land-use and forestry land use are incorrect for the Big and Little Quilcene Rivers. Much of these watersheds are used for commercial forestry by the USFS, State and private landowners. A lot of the watersheds are also within USFS designated wilderness area and Olympic National Park boundaries which should be considered no land-use areas.

26. (Page D-1, Table D-1)

The Quilcene National Fish Hatchery has been continuously monitoring temperature in the Big Quilcene River and Penny Creek for approximately 20 years.

27. (Page D-2, Table D-3)

Channel condition habitat data was collected on the Big Quilcene River in 1994 by the USFS and Washington Department of Natural Resources as part of the USFS/DNR Big Quilcene watershed analysis.

28. (Page C-2)

We would question your methodology for weighted - average technique.

29. (Page C-3, Table C-4)

How did you arrive at the Total Riparian Lengths?

Again, the City appreciates this chance to review and comment on the report. Due to the technical nature of this report, the extensive ramifications, and the complexity, the City would encourage a face to face meeting to discuss these comments. If you have any questions on these comments or would be willing to meet with the City, please contact Bob Wheeler at (360)385-7212, ext.1167 or Ian Jablonski at (360)379-5001.

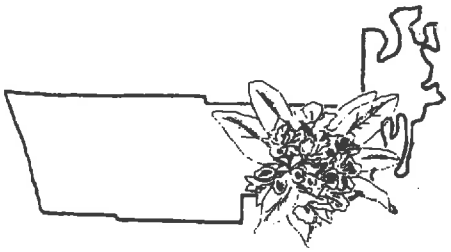
Sincerely,

Stan McNutt
Interim City Manager

Sydney Lipton
CityCouncil
Public Works Committee Chair

Robert Wheeler, P.E.
Director, Public Works

cc: City Council
Planning Unit
JCWRC



JEFFERSON COUNTY
DEPARTMENT OF PUBLIC WORKS

P.O. Box 2070
1322 Washington St.
Port Townsend, WA 98368
(360) 385-9160

Frank Gifford, Public Works Director/County Engineer

May 5, 1999

Limiting Factors Comments
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, Washington 98376-5002

Attention: Jay Watson

Subject: Habitat Recovery Plan - Hood Canal Summer Chum

Dear Mr. Watson:

Thank you for providing Jefferson County Department of Public Works with the opportunity to comment on the Final Draft of the Habitat Recovery Plan for Hood Canal Summer Chum. The Public Works Department has been proactive in identifying and prioritizing roadway fish passage barriers for several years in a coordinated effort with State Fish & Wildlife and the local Tribes. Several culverts have already been replaced to enhance fish passage and eight (8) culvert replacement projects are currently underway.

The Irondale Road culvert at the Chimicum Creek crossing has not been identified as a fish passage barrier. The Hood Canal Habitat Recovery Plan indicates (with a rating of 0, pp. 13-14) no roadway fish passage barriers on Chimicum Creek. The Irondale Road crossing consists of a 17-foot wide by 9-foot high bottomless arch culvert installed in 1983. It was designed and installed to accommodate fish passage per State Fish and Wildlife Hydraulic Permit Approval (HPA) requirements and included placement of appropriately sized streambed gravel to accommodate fish use. This culvert has a design life of at least 50 years, and it has proved more than adequate to handle record runoff events without causing backwater conditions.

The Habitat Recovery Plan (Chimicum Creek Narrative – Factors for Recovery, Appendix B) recommends replacement of the Irondale Road crossing with a bridge to remove the possibility of future culvert/fill failure. However, the Public Works Department considers failure of the culvert and collapse of the Irondale Road fill a highly unlikely event at this location given the design of this newer culvert. Replacement of the existing fill and culvert with a bridge could easily cost several million dollars based on experience with similar bridge projects. Suggesting that such a large sum be spent to mitigate potential impacts from a highly unlikely event may not be in the best interests of the recovery plan. It is the recommendation of the Public Works Department that available funding be allocated to mitigate identified fish passage barriers or to implement other habitat recovery programs which would have immediate benefits.

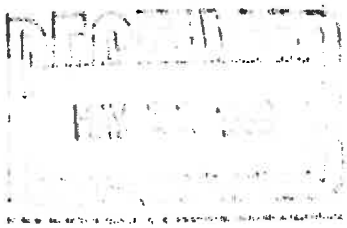
Thank you again for the opportunity to comment. If you have any questions, feel free to contact me at (360) 385-9160 at the Jefferson County Public Works office.

Sincerely,

Frank Gifford
Public Works Director/County Engineer, Interim

C:\CMONTE\Misc\documents and spreadsheets\habitat recovery letter.doc

To: Limiting factors Comment
HCCC
P.O. Box 5002
Quilicene, WA 98376



From: Robert J. Sund
26476 N. Highway 101
Hoodsport, WA 98548

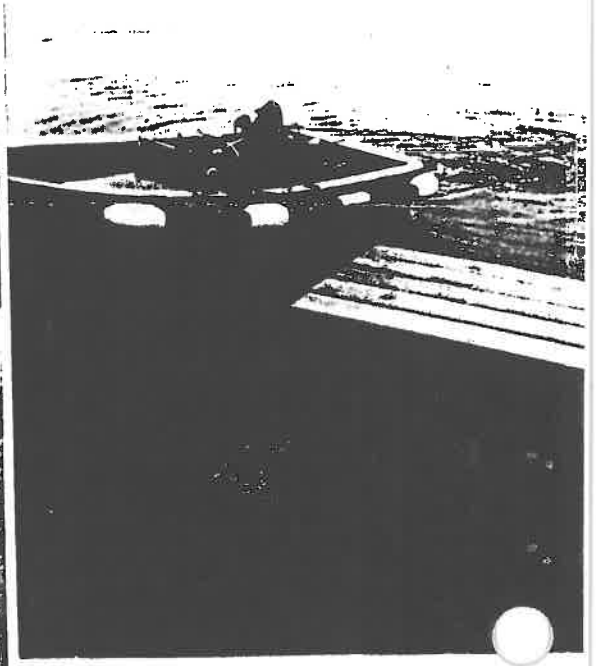
Date: May 10, 1999

This letter is written as comment to the Hood Canal/Eastern Strait of Juan De Fuca Summer Chum Habitat Recovery Plan. Since the window of response is short and the document long, I will focus on only one issue, the estuarine nearshore habitat, particularly the eelgrass and kelp beds. The document stresses the importance of this habitat because of its food source, protection from predators and migratory route to the open sea. A statement on page A-12 states "If there is one guiding concept to the ideas express in this document, it is that estuarine nearshore summer chum habitat is an essential segment in a continuum that bridges their natal freshwater with open ocean rearing ecosystems."

While potential impacts on eelgrass and kelp beds such as bulkheads and docks are addressed, no mention is made to direct degradation of eelgrass beds. Please note copies of pictures I have taken showing purse seiners dragging their net lead lines across the eelgrass and kelp beds in front of my home. A document written by the Puget Sound Water Quality Action Team even lists that scouring action from moorage buoys is a very detrimental factor in the degradation of eelgrass beds. Certainly, if moorage buoys create a detrimental scouring action, net lead lines is of much greater scope and consequences. Again, from the document page A-12, "Ignoring causes for decline and actions for recovery within the estuarine landscape will likely neutralize any significant recovery actions in individual watersheds or subestuary deltas." Therefore, I conclude that eelgrass and kelp beds must not endure any additional degradation. This document must not ignore, but address this issue of net lead lines.

Bob Sund


S
W



May 11, 1999

Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376-5002

R.E. Comments on the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan (Mar. 23, 1999)

Dear Council Members:

I am submitting the following comments to the document authored by the P-N-P Treaty Council, Skokomish, Port Gamble S'Klallam, and Jamestown S'Klallam Tribes, and WDFW. I want to state that I highly commend the product and the effort that went into this analysis. This project has used specific local knowledge of the biologists most familiar with the areas to develop the Limiting Factors Analysis. This ensures that recommended resource protection strategies are the most credible and likely to succeed in meeting objectives. A locally produced resource protection and restoration plan is bound to be more appropriate and effective than measures developed at a state-wide level that are based on political negotiations rather than site-specific conditions. I provide you with comments to clarify some of the strategies or to strengthen their intent with more specificity. I strongly encourage the Council to use its influence to have the recommended strategies adopted as regulations on land use in order to promote the recovery of summer chum to Hood Canal and the Eastern Strait of Juan de Fuca.

Riparian Protection/Restoration Strategy
I support and strongly agree with the recommendation of riparian buffers of 250 feet wide or SPTH with no harvest in floodplains. It should be explicitly noted that 250 feet is the approximate height of a Douglas fir at 200+ years of age. When referring to SPTH it is essential to give the age of the tree to which that refers. Otherwise, there is a discrepancy between a buffer width based on tree height at age and the stated 250 feet.

The rationale for using the age of 200+ years is that salmon have thrived under old growth forest conditions, while it is inconclusive that they do so under intensive forest management. Such management commonly limits tree growth to 30-40 years and defines "mature" trees as 100 years old.

The analysis of riparian value in Appendix C is somewhat inconsistent with the recommended buffer widths. The analysis was limited to within 200 ft. of the stream, and LWD recruitment of approximately 77% from a buffer of 135 ft. (transcribed to 132 ft. in the rating system) was considered "low" in terms of impact. The relationship of a "low" impact rating from a buffer of $\geq$132 ft. to the recommended buffer width of 250 ft. should be explained.

It should be noted that while the impact may be rated "low", there is a higher risk to recovery of habitat conditions that would support a potential recovery of summer chum

populations with buffers of 132 ft. wide versus 250 ft. wide. The reason is that a portion of total wood is lost from the upper portions of old growth trees if recruitment is limited to within 132 ft. of a stream. Total wood, as opposed to functional wood, includes small pieces that add to the nutrient cycling and other functions important to the whole ecosystem of a stream, not just the channel-forming processes. I would recommend that to reconcile the differences between the 132 ft. of the analysis and 250 ft. buffers recommended that the limitations of the methodology (based on Watershed Analysis module) in Appendix C be acknowledged. A buffer of 132 ft. should be considered the minimum width and highest acceptable level of risk for summer chum recovery.

I also strongly support protection of remaining intact riparian stands through easements, purchase, or other binding agreements. Restoration is desirable, but protecting habitat which is already functioning should be the priority.

Sediment

In general, I recommend that the "Protection Strategies" section for this parameter reference specific standards and guidelines and the respective regulatory authorities either as an appendix or somewhere in the report text.

The Kitsap County critical areas ordinances for "areas of concern" and "geological hazard" areas are potentially more protective of aquatic resources than current forest practices rules applied on state and private forest lands. The county requirements prohibiting clearing of steep slopes in ravines containing a stream and at least 25 ft. back from the break in slope is a good strategy. The standards for a geologist's report for situations where slopes are less than 30% or not above a stream should be consistent and include explicit delivery criteria.

The minimum standards that should apply, whatever the regulations are, can be stated briefly as follows:

Low Hazard Mass Wasting areas – Harvest allowed if there is no delivery to surface waters and riparian areas, using specified *delivery criteria.

Moderate Hazard Mass Wasting areas –

- No removal of trees (clearcut harvest or partial cut) on steep slopes (50% and greater) unless analysis by a qualified geotechnical expert (not a forest engineer) to specified standards indicates no increase in landslide hazard. Trees in leave areas are to be windfirm.
- Analysis of moderate hazard areas is site specific and uses field data.
- A financial bond is posted for restoration/mitigation if the unit fails (slides) within set period of years post-harvest.

High Hazard Mass Wasting areas –

There is a degree of risk to increase the potential for landslides due to loss of root strength and altered hydrology associated with logging (Krogstad, 1995; Sidle, 1992). In view of the listing of the summer chum as well as other species of salmon, the prudent actions are described below.

- No removal of trees (clearcut harvest or partial cut) on the most unstable landforms (steep streamside adjacent hillslopes, hollows, active deep-seated landslides). Leave areas are to be windfirm.
- Harvest is prohibited in the groundwater recharge areas above glacial deep-seated landslides as determined topographically or by the methods of Miller and Sias (1997), unless a specified analysis shows no increase in instability.

A "loophole" that should be examined is the conditioning authority that neither the county or DNR have on clearing of forest between rural residential developments. If forest stands are within a certain distance of a structure, DNR will consider logging in that area to be part of an existing conversion. However, the county may have no conditioning authority in these areas either. In such situations, prevention of mass wasting in steep ravines would not be adequately addressed.

* delivery criteria = potential for delivery exists when the gradient downslope of the hazard area is greater than 50% for a minimum of 500 ft. from all typed waters.

Roads

I recommend that the "Protection Strategies" section for this parameter reference specific standards and guidelines and the respective regulatory authorities either as an appendix or somewhere in the report text.

At a minimum, the standards that should be applied to roads, whether they are county, private, state, or federal should be as follows:

- Culvert spacing should be based on hillslope gradients, not road gradients on the steepest slopes (greater than 70%) per the method developed by Montgomery (1993) to prevent erosion or landslides at culvert outfalls.
- All excavated material should be removed during road construction on slopes greater than 50%.
- Road construction and maintenance should be linked to an unstable slope hazard inventory.
- No new roads should be constructed on the highest hazard mass wasting areas (toes of deep-seated landslides, active deep-seated landslides, steep inner gorges with slopes greater than 65%). Both a certified engineer and a mass wasting analyst should be included on road design/construction on slopes greater than 50%. A financial bond is posted for repair and restoration if the road fails and delivers to a stream.
- New culverts are constructed to pass 100-year flows.
- Blocking culverts should be prioritized for repair/replacement that impair fish passage.
- No new roads within 200 feet of Types 1 – 3 streams (or current typing classification) or Class A and B wetlands.
- Complete all repairs and deconstruction within 5 years if there is a debris flow potential that affects fish habitat.

Wetlands

The Dept. of Ecology is currently testing a hydrogeomorphic classification of wetlands that is proposed to replace the current classification system. However, buffer standards associated with these types and the ranking of functions by wetland type remain to be developed. Interim standards should be applied following the guidelines of current state forest practices rules with the following modifications:

- No new roads and no harvest and bogs or fens greater than or equal to 0.25 acres.
- No harvest within one site potential tree height at age 200 of Category 1 (or highest class of DOE system) wetlands including forested wetlands if they meet the criteria.
- Maintain buffer of 100 ft. around nonforested wetlands of 0.25 to 1 acre with no harvest in the first 50 ft. and selective management in the next 50 ft. Selective management shall retain 70% canopy closure. The remaining trees should be representative of the species composition and size of the original stand.
- Maintain a buffer of one site potential tree height at age 200 around nonforested wetlands greater than 1 acre with no harvest in the first 50 ft. and selective management in the remainder. Selective management shall retain 70% canopy closure. The remaining trees should be representative of the species composition and size of the original stand.

Limit logging in forested wetlands that are not Category 1 wetlands to retain 70% canopy closure. The remaining trees should be representative of the species composition and size of the original stand.

Water Quality

Temperature

Under "Protection Strategies", is suggest setting a target for volume of coarse sediment input from road and logging related landslides. Channel widening from deposition of coarse sediment is acknowledged as a factor contributing to increases in water temperature due to greater solar exposure. The Environmental Protection Agency is currently developing targets for sediment input and water temperatures as part of a pilot TMDL (Total Maximum Daily Load) for forestry activities that contribute to nonpoint source pollution of streams. This effort, while not complete, would be worthwhile to discuss and incorporate in the Recovery Plan to anticipate regulatory processes that may be duplicated. I recommend opening discussions with that agency.

Toxics

The regulatory authority for jurisdiction over domestic and commercial toxic wastes to waters of the state should be identified in this section with the associated fines and penalties. An evaluation of the effectiveness of these regulations and enforcement should be undertaken. If necessary, more restrictive regulations or ordinances should be developed and fines/penalties increased to promote responsible handling of toxic materials.

Sincerely,

Janet Burcham

Janet Burcham
Northwest Indian Fisheries Commission

REFERENCES

Krogstad, F. 1995. A physiology and ecology based model of lateral root reinforcement of unstable hillslopes, MS thesis, Univ. of Washington, Seattle, WA. 45 pp.

Miller, D. and J. Sias. 1997. Report to the Tulalip Tribes and the State of Washington Department of Ecology. Mirage Environmental Services. Seattle, WA.

Montgomery, D. 1993. Road surface drainage, channel extension, and slope stability. *In* Geomorphological Watershed Analysis Project, final report for the period from 10/1/91 to 6/3/93, Montgomery and others, report to Timber/Fish/Wildlife, TFW-SH01-93-001.

Sidle, R.C. 1992. A theoretical model of the effects of timber harvesting on slope stability. Water Resources Res. (28):1897-1910.

JEFFERSON COUNTY CONSERVATION DISTRICT
205 W. Patison St., Port Hadlock, WA 98339 - Phone (360) 385-4105
e-mail: jccd@olypen.com

May 10, 1999

To: Hood Canal Coordinating Council

From: Jefferson Co. Conservation District

Subject: **Comments on the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan, final draft**

The authors and contributors to this document are to be commended for an outstanding effort. This plan will be very useful for guiding restoration efforts and obtaining funding for those efforts.

Jefferson County Conservation District has been very active in salmon habitat restoration and protection for many years. The following comments are based on this experience and hopefully will serve to make this document even more useful as a tool for summer chum recovery.

"Factors for decline": Though this document deals with factors affecting the summer chum salmon in the freshwater environments the effects of ocean conditions and harvest should also be mentioned. Someone reading this document could come away with the impression that all the factors for decline affecting summer chum are due to freshwater habitat problems, and ocean conditions/harvest have not had any negative effects on them. It would not require an in-depth analysis of ocean conditions/harvest, but just an acknowledgment that they are also contributors to the decline of the summer chum.

Pg. 13 Table 2: Summary of ratings for habitat factors for decline: There are a number of errors associated with the ratings for Chimacum Creek.

- Temperature: Rated as "2 - moderate impact". See enclosed chart of 1998 temperature data and page 19 comments below which indicate that this should be changed to **"0 - no impact to chum."**
- DO, FC: Rated as "1 - moderate impact". See enclosed chart of 1998 DO readings and page 19 comments below about Fecal Coliform levels which indicate that this should be changed to **"0 - no impact to chum".**
- Floodplain loss: Rated as "3 - high impact". Should be **"0 - no impact"**. There has been little loss of floodplain area in the entire Chimacum Creek watershed. There have been changes to the functions and values of that floodplain, especially above RM 3 but there are no dikes and it still floods. The floodplain in the area utilized in recent history by the summer chum is intact. It is ironic to note that Chimacum Creek has a higher "floodplain loss" rating than the Big Quilcene River where most of the river used by summer chum is diked.

Pg 21 "Protection Strategies - Restoration Options - 1. Re-vegetate degraded riparian areas. Farmers can enroll in the USDA/Washington State Conservation Reserve Enhancement Program (CREP)."

The NRCS Riparian Forest Buffer Standard that will determine the width of the buffer eligible for this program has not been finalized as of 5-10-99. The final draft specified minimum buffer widths of 83' to 105' for the riparian soils in Jefferson County with a site index rating. Many of the riparian soils in Jefferson County do not have a site index rating. Some of these soils probably only supported shrubs and willow - a buffer based on site index for these sites would be very narrow. 150' is the maximum buffer eligible for CREP.

Pg 24 "Sediment - Protection Strategies: 2. Fine Sediment: "Prevent the entry of fine sediments into any stream channel....." Would suggest replacing "Prevent" with "**Minimize**". There is no way to totally prevent the entry of fine sediments through implementation of regulations or standards.

Riparian Buffers (pgs. 12, 21, 25): This document indicates that 250' forested riparian buffers (measured from the landward edge of the channel migration zone or the 100 yr. flood plain [whichever is greater]) are necessary throughout the watershed on all but seasonal streams for the restoration of the summer chum salmon. This gives readers the impression that without 250' buffers throughout the watershed there is no chance for summer chum recovery. 250' forested riparian buffers are an ideal, but summer chum recovery can happen with narrower buffers in many reaches of the streams. It is a disservice to an otherwise exceptional document to advocate "one size fits all" of an extremely wide buffer as the only alternative. Advocating this buffer size will be counter-productive because it will become the "lightning rod" upon which all landowners will focus and substantially inhibit cooperative restoration efforts. A buffer this size would preclude the possibility that salmon recovery and agriculture can co-exist in Jefferson County. For instance, a buffer based on this standard would encompass virtually all of the prime agricultural land in the Chimacum and Snow/Salmon Creek watersheds. The good farm land remaining outside this buffer would not be enough to support any sort of commercial agricultural operation.

If this was in fact the absolute minimum buffer that would allow the recovery of summer chum, that would be another story. But it is not. For instance, on pg. B-11 (Salmon Creek) is the statement that "Stock status has been relatively stable, ranging between several hundred and several thousand during the 1980's to 1991" (when the supplementation program began). The chum spawning area of Salmon Creek has been intensively pastured (no fencing) to the waters edge for decades (though it is currently fenced). There are only scattered large alder on the stream banks throughout this area and yet it has supported a stable stock of summer chum. ANY buffer would be a major habitat improvement. There is a good chance that the landowner will adopt a smaller than 250' buffer, but advocating the 250' buffer width from the edge of the floodplain will preclude his voluntary involvement with any buffer. Also, the maximum buffer eligible for enrollment in the Conservation Reserve Enhancement Program (CREP) is 150'; the minimum in Jefferson County runs from about 83' to 105' (based on ¾ of the SPTH measured from bank-full width). It is interesting to note that Salmon Creek (no forested riparian buffer) is supplying summer chum salmon for reintroduction to Chimacum Creek (intact forested riparian buffer in summer chum spawning area) but where the stock is extirpated.

There are examples of narrower buffers that provide good salmon habitat. For instance, the area downstream of the Chimacum - Hadlock Road crossing (RM 0.2 on E. Chimacum Creek) has a 20'-30' forested buffer that has not been subjected to livestock grazing for quite some time (20-30 years?). This is a buffer that provides good salmon habitat and still allows the use of adjacent land for agriculture.

Much is made of the lack of large woody debris (LWD) in the streams. The proponents of 250' buffers indicate that adoption of this buffer size will insure the addition of LWD to the system. Maybe, someday. Realistically, in order for LWD to be added to the systems in a time frame that will have beneficial effects for currently struggling salmon stocks it will have to be placed there by humans. The recovery plan should strongly support current efforts to rehabilitate salmon habitat utilizing placement of LWD - an expensive way to go but the only way to get LWD into the streams in our lifetimes.

The problems with "windthrow" in narrow buffers is another reason given for the need for the 250' buffer. Windthrow is primarily a problem in areas where most of the adjacent trees suddenly disappear, such as during a harvest operation or for development. Most of this windthrow occurs in the first three years after harvest and after that the stands stabilize. However, trees growing up in a narrow buffer, such as a new riparian buffer in farmland, are adapted to that situation and are not particularly subject to windthrow.

Buffer widths should be site specific and based on soil type, topography, channel width and adjacent land use. A "best science" approach would pose the question: "What is the optimum buffer that will provide good salmon habitat and water quality protection, and is compatible with adjacent land uses."

Pg 37: State Agencies: DNR: The DNR "Jobs for the Environment" program has funded a number of salmon habitat restoration projects in the summer chum ESU, utilizing displaced natural resource workers (loggers and fishers) to do the work. These crew have developed a great deal of expertise in salmon habitat restoration work and their efforts should be supported and continued.

Pg 38: Non-governmental entities: Conservation District's and the Washington State Conservation Commission are listed under this heading. The Conservation District's should be listed under "Local governments" as they are legal subdivisions of state government, much like a fire district or school board. The Conservation Commission is a State agency.

Community groups such as Wild Olympic Salmon and the Regional Fisheries Enhancement Groups have, and will continue to play a key role in implementing salmon habitat restoration efforts. This should be recognized and given support in this document. Without the efforts of these groups, the Conservation District and Tribes little, if any, salmon habitat restoration work would have occurred in E. Jefferson County.

Would suggest the following: **"Local efforts led by community groups such as Wild Olympic Salmon and the Regional Fisheries Enhancement Groups, working cooperatively with the Conservation District's and Tribes, have been responsible for most of the on-the-ground salmon habitat restoration work accomplished in recent years. Funding and technical assistance support for these groups should be continued."**

Pg B-19 - Chimacum Creek - Water Quality: "However in years when the summer dry season overlaps the fall spawning season, stream temperatures and low oxygen levels resulting from livestock waste may be a significant impact." Our data suggests that it would be more accurate to say: "However in years when the summer dry season overlaps the fall spawning season, stream temperatures ~~and low oxygen levels resulting from livestock waste~~ *may have an impact, though critically high stream temperatures have not been documented in the summer chum spawning area.*"

Low oxygen levels in the summer chum spawning area of the creek have not been documented to our knowledge. We have been monitoring water quality, including fecal coliform, temperature and DO, in Chimacum Creek for several years. The lowest dissolved oxygen level recorded in the summer chum spawning area during summer 1998 was 9.3 ppm (See enclosed dissolved oxygen chart). There has been documentation of significant low oxygen levels in sections of the creek infested with Reed Canarygrass (well upstream of summer chum spawning area), but there are ample opportunities for aeration of the water between those areas and the chum spawning area. Low oxygen levels in some of the agricultural areas of the creek that have been documented have been linked to decomposition of reed canarygrass rather than livestock waste. Though livestock waste can provide nutrients for the growth of canarygrass, there is enough canarygrass in the system to affect oxygen levels in some reaches whether it gets added nutrient from livestock waste or not. Extensive fencing of Chimacum Creek has resulted in significant improvements in water quality in the last 15 years. The fecal coliform levels from water quality testing done monthly in 1998 (at the Irondale road

culvert RM 1.1) had a geometric mean value (GMV) of 49 FC/100ml (50 FC/100ml is the Class AA limit). These figures indicate that the effects of livestock waste in the watershed have negligible effects on water quality in the summer chum spawning area.

Stream temperatures: Stream temperatures were recorded in 1998 using continuously recording temperature data loggers. The data logger located in the summer chum spawning area recorded a high temperature of approx. 19° C for a couple of days in late July. All temperatures recorded when summer chum would be utilizing the area were below 16° C (the standard for class AA water - see enclosed temperature chart). In an exceptionally hot year the temperatures could be somewhat higher but whether or not they would be high enough to have a negative effect on spawning is based on speculation, not data. "Livestock waste" would not effect the water temperature.

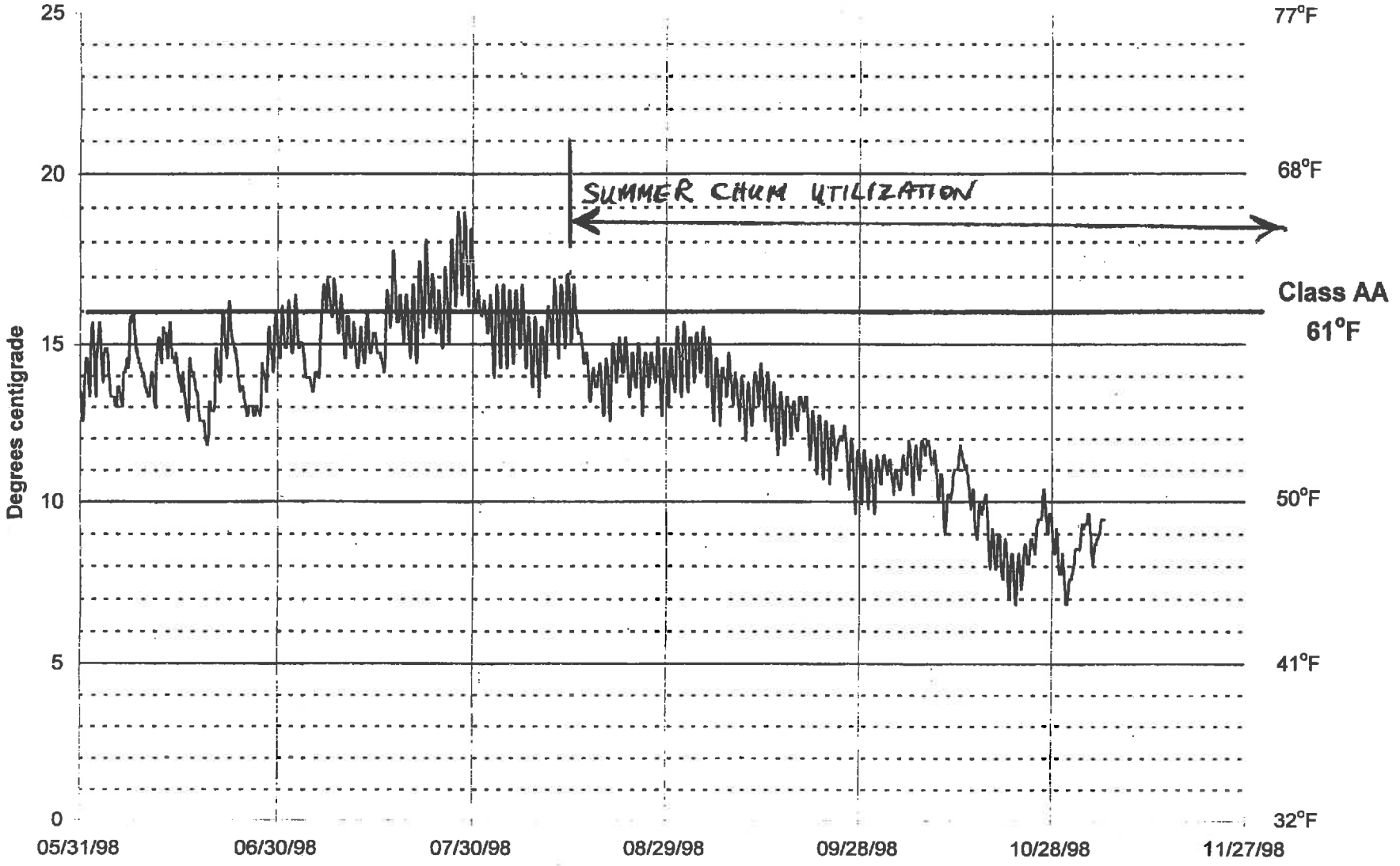
For more detailed information on water quality in Chimacum Creek contact Glenn Gately at the Jefferson Co. Conservation District office.

Chimacum Creek - Factors For Recovery, pg. B-20: "Replace fill and culvert at the Irondale Road crossing with a bridge to remove possibility of future culvert failure". After the Irondale Road culvert failed in 1983 it was replaced with a much larger (17' bottomless) culvert. The cost of replacing it with a bridge would be a million dollars or more - money that would be much better spent elsewhere in the watershed.

Please refer any questions about these comments to Al Latham, District Manager

Jefferson County
Conservation District
205 West Patison St.
Port Hadlock, WA 98339

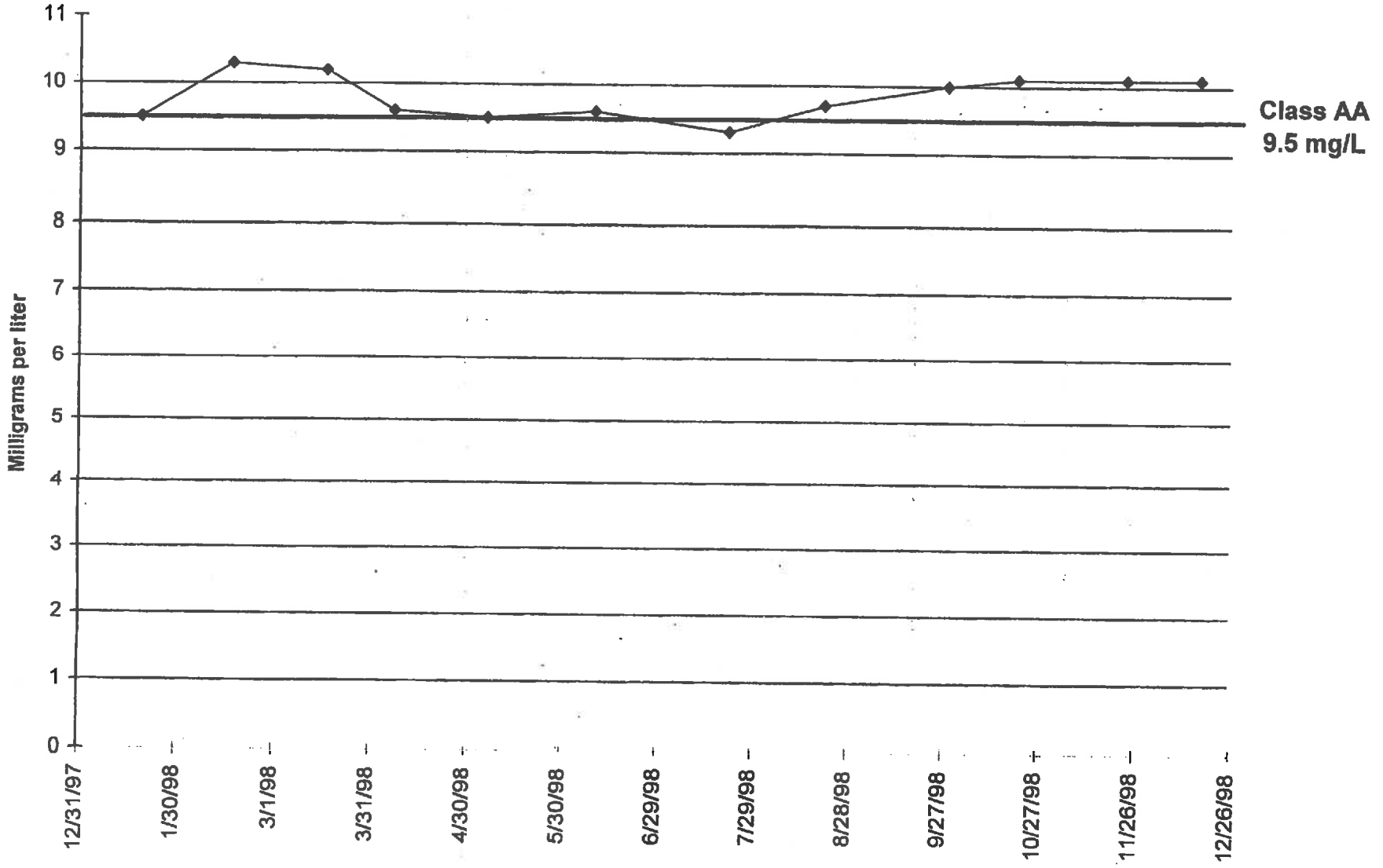
Chimacum Creek at Mouth (CH/0.1)



All temp data ChtCH0.1b 4/16/99

Jefferson County
Conservation District
205 West Patison St.
Port Hadlock, WA 98339

Dissolved Oxygen
Chimacum Creek at Mouth (CH/0.1)



HOOD CANAL
SALMON ENHANCEMENT GROUP

To: Jay Watson, Hood Canal Coordinating Council

From: Al Adams, Hood Canal Salmon Enhancement Group

Re: Input Hood Canal / Strait of Juan de Fuca Summer Chum Habitat Recovery Plan

May 11, 1999

Our review of the draft plan resulted in the following recommendation:

The document remain a draft plan. Much review and refinement from other knowledgeable and responsible members of the HCCC are needed. It is a good start, not a final draft. Many inconsistencies, inaccuracies and significant omissions preclude a final draft status.

The geographical, historical, biological and (significantly) fishery literature and data are not presented. Significant numbers of site specific fishery memos, documents, and peer review literature are missing from the discussion and presentation of facts. This substantially limits and reduces the impact of the document in achieving the desired effect.

In numerous cases, misinterpretations of fundamental ecological theory, fact and history were found to dominate inappropriately conceived arguments about stock restoration methods. There simply is a failure to grasp the most basic of ecologically based environmental concepts.

In short, this paper lacks sufficient scientific rigor. To label it as anything but a position paper by an interest group (albeit the co-managers) does injustice to scientists, the scientific method and simple reasoning. Common sense would indicate the need for more input from other stakeholding interests including scientists.

Al Adams, Executive Director
Hood Canal Salmon Enhancement Group

POST OFFICE BOX 2169 • BELFAIR, WASHINGTON 98528 • PHONE/FAX NUMBER: (360) 275-3575

Economic Development Council of Mason County

P.O. Box 472 • Shelton, Washington 98584 • (360) 426-2276 FAX (360) 426-2868
Web Address - http://www.waedn.org/Edcs/Edc0065 • Email: masonedc@hctc.com

May 12, 1999

Donna Simmons
Hood Canal Coordinating Council
Limiting Factors Comments
P.O. Box 5002
Quilcene, WA 98376-5002

Dear Donna,

Thanks for the opportunity to review the Hood Canal/Eastern Strait of Juan De Fuca Summer Chum Habitat Recovery Plan. Although the plan is detailed and lengthy, our comments will be brief and to the point.

We are disappointed that the plan takes such a leisurely approach to solving what we see as a problem requiring immediate, forceful and positive action. Although we realize that the plan is a habitat recovery plan and not a Summer Chum recovery plan, we were hoping that the current draft would focus more on actions that would be of direct benefit to declining stocks. We would like to see a recovery effort that demands a spawning escapement large enough to guarantee a reversal in declining species. Instead, we see a focus on poorly documented habitat recovery issues that might eventually have some impact.

In a second area of concern, we fear that this draft may lack credibility because of its reliance on unscientifically sound assumptions. Any plan that builds its basic case on words and phrases like: presumably, likely, hypothesized, may, probably, suggest and may have, runs a real risk of not being taken seriously.

Our overall concern is that this approach is so complicated, unscientific and unrealistic that it virtually guarantees its own failure. (An example of what makes us say the plan is unrealistic is illustrated as follows: The average rainfall in Mason County is 65 inches a year. At that, each acre of ground must drain 234,000 cubic feet of water annually. That requires numerous small storm drainage rivulets on each acre. By definition, those drainage rivulets are all class V streams. To establish 250 foot wide buffers either side of each class V stream would more than cover

every acre of ground in Mason County.) That is unrealistic.

Meanwhile, more effective approaches to solving the recovery problems are being "set aside to be addressed at some later date."

We hope these comments have been helpful and we look forward to future work and correspondence on this subject.

Best regards,

Jay Hupp
Assistant Director

May 12, 1999

Limiting Factors Comments
Hood Canal Coordinating Council

Thank you for the copy of the summer Chum 'Habitat Recovery Plan'.

Of the human uses of land near salmon streams, forest uses should be encouraged. Carefully planned forest practices have very little negative impact and a great deal of benefit to a stream over time. Documented studies have shown that the possibility of siltation lasts for only 2 years after harvest if roads are constructed correctly. After harvest the forest will grow for a minimum of 40 years - probably considerably longer - before the next harvest giving the forest is abundant benefits to the watershed during this time.

All other activities have greater impacts on streams with their hardening of surfaces, contamination and water withdrawal for wells and irrigation.

Woodland owners are very upset and frightened at the prospect of wide buffers. They fear that they will have little of their investment left which they were counting on for income, retirement and to pay inheritance taxes so heirs could keep the forestland. If it must be sold it is unlikely to remain in forest use in the Hood Canal, SJF area.

Incentives must be found.

- If a person gives a conservation easement to keep the land in forestry could he do some harvesting within the forest buffer?

- Could a landowner write his own habitat conservation plan to give him ownership in what happens and some flexability?
- Could inheritance tax laws be changed so the land can be affordable if the children will 'contract' to keep the land in forestry?
- The CREP Program should certainly apply to woodland owners too.
- Could an excise tax be charged on salmon sold (or a part of fishing license fees) to help reimburse landowners for the use of their land as habitat?

Incentives exist, we just have to find them.

As you can tell I am writing on behalf of non industrial woodland owners.

Thank you,

Helen V. Daly
7448 N.W. Ioka Dr.
Silverdale, WA 98383
Phone #(360) 692-5148

Olympic Chapter of Washington Farm Forestry Assn.
(includes Mason, Kitsap, Jefferson & Clallam Co.)

STATE OF WASHINGTON
DEPARTMENT OF FISH AND WILDLIFE
48 Devonshire Road • Montesano, Washington 98563-9618 • (360) 249-4628 FAX (330) 664-0689

12 May 1999

Byran Rot
Pt No Pt Treaty Council
7999 NE Salish
Kingston, Washington
98346

Byran,

My technical comments to the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan follow. These comments apply specifically to Protection/Restoration Strategy (page 17), Nearshore Habitat Problem Statements, Objectives, and Protections Strategies (page 27) as well as the Monitoring Table (page 34). As I mentioned in our phone conversation, there are three additional points that bear discussion within the Plan. All are covered in detail in three attached publications entitled *Kelp bed habitats of inland waters of western Washington; Hood Canal Aquatic Vegetation: an overview and study plan*, and; *Ulvoid mats and shellfish resources: a pilot study*. Please let me know if you have any additional questions.

A. Kelp habitats need much more discussion in this work. Right now your recovery objectives, toolkit and associated strategies focus mainly on eelgrass issues. Subtidal kelp habitat covers at least, and likely much more, shoreline than eelgrass in Hood Canal and the Strait. Kelp use by both coho and chinook is well known local knowledge, but not quantified in the scientific or management literature. Even less is I believe known about chum use. Here are some points of whjat is known about these habitats: 1) The structure of kelp habitats of Puget Sound and Strait of Juan de Fuca appears to vary seasonally as well as by species and geographic location. The same is likely true of Hood Canal kelp beds (but again not documented to date). Kelp are also biologically much different than eelgrass, and found in different substrate types. Kelp function as salmonid habitat is therefore likely to be much different than function of eelgrass habitat. I would therefore offer that the unique biology and function, local knowledge of use, and concomitant lack of documentation of this use justifies giving kelp habitats much more profile in salmonid habitat plans.

Information needs for kelp habitats, listed in the attached publications, includes:
1. Inventory of both overstory and understory kelp habitats in the Strait and Hood Canal;
2. Define species use and geographic priority use sites;
3. Define human impacts to these habitats;

4 Define management strategies to prevent impact as well as and restore lost or degraded habitat

B. Water quality is likely to be a significant factor in changes to nearshore habitats, and may impact both habitat available and fish use. Ulvoids are documented to negatively impact eelgrass beds, and may in fact force shifts in eelgrass, kelp, and sandy shore habitats. Ulvoid mats are thought to be increasing in Sequim, Discovery, and Dungeness Bays, among others. Recovery Objectives for Saltwater Migration (page 17) should therefore be expanded to cover more than simply eelgrass, and water quality should be included. This discussion also applies to the Protection Strategies recommendations within the Nutrient section of the Water Quality discussion (page 22). Additional strategies might include preventing diversion of non-point runoff and gray water onto shorelines. Restoration options include replacement of inadequate run off systems to eliminate nutrient enriched water runoff to shorelines.

C. The Nearshore Habitat Monitoring discussion (Key Monitoring Questions and Approaches, table 5) needs to be a much broader discussion on all elements of nearshore habitat composition and use, not simply beaches and armoring. *The Hood Canal Aquatic Vegetation Overview and Study Plan* is a good overview of categories and issues for nearshore habitats and priority activities, and offers recommendations that would fit well into this section.

I hope you find these suggestions of use. It should be said that your collective work has resulted in an excellent document that will help us all go forward efficiently and with confidence. Thanks again for considering my input to the process.

Sincerely,

Anne Shaffer
Habitat Biologist
Washington Department of Fish and Wildlife
360-457-2634
360-417-3302
shaffjas@dfw.wa.gov

cc: Burkle
Johnson

WASHINGTON ENVIRONMENTAL COUNCIL

Washington Environmental Council

615 2nd Avenue Suite 380 Seattle WA 98104-2245

May 13, 1999

Jay Watson, Executive Director
Hood Canal Coordinating Council
PO Box 5002
Quilcene
WA 98376

Subject: Draft Summer Chum Habitat Recovery Plan

Dear Jay,

The Washington Environmental Council commends this final draft Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan (Plan). ESU conservation efforts must be sufficient in scope to address all major factors that degrade environmental quality and impact fisheries, and this plan succeeds in providing a comprehensive limiting factors analysis for summer chum. It clearly describes the relationship between summer chum life history stages and the habitats and physical/biological processes that sustain them. It also reveals the importance of life history variation between the different ESU stocks, the differences in habitat conditions across individual watersheds, and the linkages between freshwater and estuarine systems.

While the plan employs watersheds as the basic unit for the freshwater and subestuary limiting factors analysis, it also acknowledges that the processes that sustain chum habitats operate at multiple scales, including stream reach, watershed, estuarine and nearshore habitats. Appendix A is particularly valuable, illuminating how the integrity of the "bridges" consisting of natural beaches, eel grass beds and drift cells must be protected in order to provide functional summer chum migration corridors that connect the individual sub-estuary river deltas associated with watersheds in the ESU. This information

OLYMPIA (360) 357-6548
SEATTLE 615 Second Avenue, Suite 380, Seattle, WA 98104-2245
SPOKANE (509) 328-5077
E-mail: greenwec@aol.com (206) 622-8103 FAX (206) 622-8113

will be very helpful as counties begin the process of revising shoreline management plans that can support recovery efforts. The appendix also identifies critical information needs that must be filled if we are to fully understand the influence of estuarine "landscapes" on summer chum.

We concur with the two fundamental propositions that underlie this plan: that protection of existing habitat is the first level of defense in any recovery strategy and that protection must apply to actions throughout the watershed. We recognize that many activities that adversely impact chum habitat occur above the accessible reaches that make up the primary summer chum zone. Because of the longitudinal connectivity in stream networks, these effects are translated to lower reaches. The majority of channel segments that comprise the stream are non fish-bearing. Wood, sediment, water and nutrients from these sources are essential to maintain habitats and support the life systems needed to sustain salmon and other aquatic biota that utilize freshwater habitats. The stream network must be view as an integrated whole. The goal of riparian management, for example, should be to return riparian forests to a functional state throughout the watershed.

The tool kit of protection/restoration strategies keyed to habitat parameters will provide a solid basis for affected jurisdictions to measure regulatory programs in relation to habitat objectives and for developing habitat protection actions.

Local governments that have primary authority over land use decisions that affect summer chum habitat quantity and quality, and all other parties interested in recovering the ESU, should be very grateful to have this peer-reviewed biological opinion, based on the best available science, that addresses the major factors that affect chum habitat.

Thanks to the co-managers for providing an excellent foundation for our habitat recovery efforts.

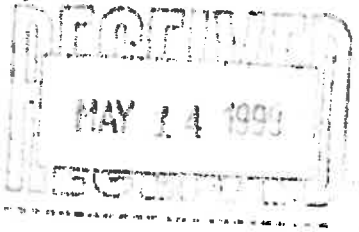
Sincerely,

Jerry Gorsline
WEC Olympic Field Rep.

United States Department of Agriculture | Forest Service | Olympic National Forest | Quilcene Ranger District P.O. Box 280 Quilcene, WA 98376

File Code: 2630

Date: May 13, 1999



Limiting Factors Comments
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376

The following are the comments from the Quilcene Ranger District on the final draft of the Hood Canal/Eastern Straits of Juan de Fuca Summer Chum Habitat Recovery Plan. This is a very complex situation and obviously, no plan can provide all the answers. This report, however, does provide a basis for development of future activities and possible direction for budgeting to assist in the recovery of the Summer Chum populations.

1. There are no maps to indicate the areas of discussion. The text under the various watersheds talks specifically to river miles, but no map to give perspective. Please provide maps.

2. (Page 1, paragraph 1)
Recovery of Summer Chum cannot be guaranteed by just protecting and restoring habitats. Many other factors are part of this equation, including fisheries harvest. This should be re-worded to more accurately reflect all the factors necessary for recovery. .

3. (Page 8, paragraph 3)
We assume that "current and recently extinct populations" does not mean currently extinct and recently extinct. This is unclear what you are saying.

4. (Page 16, paragraph 3)
You say the "Skokomish is probably the most productive subestuary in Hood Canal", but on the chart on page 10, you say the population is extinct. You also say it may help nearby runs, more discussion is needed in this section.

5. (Page 19)
This section should be an appendix or separate document. Many of these items are not realistic or appropriate in every situation. Some may work in some situations, but prescriptions should be developed for specific sites by the appropriate specialist. This section does not seem appropriate as it speculates on what might be done. It would be better to request a condition or objective rather than broad brush prescriptions.

6. (Page 20, paragraph 3)
#3-It is not practical or possible to divert all stormwater runoff onto the forest floor or into retention ponds prior to entering the stream network. Where specific conditions permit, it may be one of several options.

7. (Page 20, paragraph 3)
#4-Road engineering and density of road network depends on the use of the watershed. What "minimize " means needs to be clarified.

8. (Page 21, paragraph 3)
The 250 foot, fully vegetated stream buffer may not be practical, possible, or even natural in many situations. Is this for forest land, farm land, or communities? There is no description of what a buffer is and what can be done within it. A site specific prescription is better able to meet the intent of stream shading. Suggest deletion of the specific distance and buffer, and refer to prescribing stream shading where practical and possible.

9. (Page 23, paragraph 2)
#4-This may not be practical in all situations. Suggest goals that reflect desired conditions may be more practical.

10. (Page 24, paragraph 3)
#2 - There is a natural range of fine sediment which will be deposited into all streams. This is normal and prevention is impossible. The wording should better reflect the goals and/or desired condition.

11. (Page 25 and 26, protection strategies and restoration options)
You specify that riparian buffers should include all stream networks, including non-fish bearing. You specify that there should be a 250 foot buffer on all permanent streams and no salvage, thinning, or other manipulation of riparian vegetation, including road building. This creates an impossible situation for land management. Roads at some point must cross streams. There are silvicultural treatments which can benefit riparian vegetation. Recommend that site specific prescriptions, that reflect goals and/or desired conditions be developed for activities within riparian zones.

12. (Page 26, item #3)
#3-Silviculture is vegetation manipulation, including planting and revegetation, or hazard tree removal. This is not realistic or desirable to eliminate all silvicultural treatments within the first 50 feet of a riparian zone, channel migration zone, or 100 year floodplain. Silvicultural treatments are prescribed for an objective which may be riparian improvement. Silvicultural treatments are not experimental and are well documented as to cause and effect. However, prescriptions must be site specific.

Item #5-Replanting requires silvicultural treatment as per #3.

13. (Page B18, paragraph 2 & 3)
There appears to be a conflict. Paragraph 2 says "The mainstem enters a moderately confined and forested ravine at about river mile 1.3". Paragraph 3 says "Between RM 1.3 and 3.0, are minimal riparian forests and extensive landuse.

It also seems odd that you mention the stream passes through Chimacum and Irondale, but don't mention the largest community of Port Hadlock.

14. (Page B-18, paragraph 4)
Summer chum were documented below RM 1.3, but you base your assessment on RM 3.0 seems not based on science.

Thank you for the opportunity to review this report and comment. Please contact Steve Ricketts at 360-765-2213 for clarifiaction of any of these comments.

BENJAMIN O. KIZER
District Ranger

Received by e-mail
4-5-99

donna simmons

From: Schick, Art K. [Art.Schick@subase.nsb.navy.mil]
Sent: Monday, April 05, 1999 11:55 AM
To: 'Jay Watson'
Cc: 'Donna Simmons'
Subject: Hood Canal/SJF Summer Chum Habitat Recovery Plan

Jay: Thanks for the copy of the HCP. We will make good use of it.
I hope you can receive comments by E-mail. Mine are few. The document is great.

Page 22 - C. Nutrients - should include lawn and agricultural use of fertilizer. How about golf courses?
Page 38 - Navy is missing from Federal Agencies. As much as I would like to be off the hook, SUBASE Bangor is the largest industrial complex on Hood Canal.
Page A-17 - That is Bolton Peninsula, not Toandos on the map.

Thanks for the opportunity to comment.
Respectfully, Art Schick

Public Utility District #1

Of Jefferson County

14 May 1999

Limiting Factors Comments
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene WA 98366-5002

Dear Council Members:

The PUD has reviewed the draft Hood Canal/Eastern Strait of Juan De Fuca Summer Chum Habitat Recovery Plan. In general the document seems well done and is a welcome addition to the growing effort to better manage the State's water resources for the benefit of all it users (recreation, commercial, industrial, fisheries, environmental, agriculture, wildlife and domestic). We would like to make a few general comments and recommendations:

We understand that this is only one part of a bigger plan to increase the low number of salmon returning to their spawning grounds. Apparently plans for harvest management, hatchery planning, and an integration of those two elements with this habitat plan into a complete recovery strategy are to be done at a later time. Because those other documents are not available at this time, we would recommend this document better stress that habitat is only one possible reason for salmon declines. Over fishing, global climate and environmental changes, increased natural predators, depletion of food supplies, and past fishing methods (nets) have all contribute to the problem. Since this document is currently being read as a stand alone document, it would seem appropriate to stress the "big picture" whenever possible. For example in appendix B each chapter has a subparagraph labeled **Factors for Decline.** This subparagraph is immediately preceded by a discussion the declining stock population status within that basin. We would recommend **Factors for Habitat Decline** as a better choice of words. Small changes like this would ease a lot of peoples fears that we are going to spend a lot of time and money on what is only a part of the problem and not address the other areas of concern.

We applaud your efforts to limit private wells within water basins. Public water systems are required by law to have conservation plans (all water metered, increasing water consumption rates, leak detection) and wellhead protection plans. They also have water service areas where new individual wells cannot be drilled, but rather new customers must connect to the existing public water system. We would request you stress the need for public managed water systems over individual wells. Also, you correctly identified the need for DOE to increase their efforts to locate wells in potential hydraulic continuity with streams, to assess any impact on the habitat, and then issue water rights accordingly.

231 West Patison Street / P.O. Box 929, Port Hadlock, WA 98339 (360) 385-5800 FAX (360) 385-5945

The Jefferson County Board of Commissioners has long since designated Jefferson County as a Critical Water Supply Service Area. As a result, the County and all the County water system purveyors have developed and are continuing to update and expand the Jefferson County Coordinated Water System Plan. This document outlines policies and strategies for water utilities in Eastern Jefferson County. With your recommendation the role of this group could be directed to better integrate Regional Water Supply Planning with the proposed salmon recovery plans.

You did not mention the possibility of obtaining fish DNA for those subspecies that are currently in bad shape. It would seem taking this simple precaution could later provide a second chance to bring back certain fish runs once we have developed a viable fishery for them to exist.

We would recommend that you expand your discussion on the population status for the individual basin's. For example, the Big Quilcene Basin does not talk about the very good results the hatchery has had with summer chum returns over the past few years. This could be important. Also if there was a chart showing by year the annual return rate it would be easier to determine which factors were having the biggest impact on each individual basin. If these numbers are not available, we should be start collecting them immediately. In fact we would recommend both the number leaving and the number returning to their respective streams.

We were unsure of where the 250 foot set back came from. This figure will have a tremendous impact on landowners and therefore should be throughly explained. If there is some scientific reason or a method to calculate set backs that would be even better.

Again, we applaud the efforts taken to complete this study. We hope to use a large portion of it in our WRIA 17 basin assessment for DOE. Not only the habitat information, but the general basin descriptions should prove very valuable toward our efforts to examine the entire basin water resources and to recommend policies to optimize and protect them.

Respectively,

James G. Parker
Manager

TACOMA POWER

3628 South 35th Street
Tacoma, Washington 98409-3192

TACOMA PUBLIC UTILITIES

May 14, 1999

Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376-5002

Dear Council Members:

Subject: Limiting Factors Comments, Final Draft of the Habitat Recovery Plan for Hood Canal/Eastern Strait of Juan de Fuca Summer Chum

Tacoma Power appreciates the opportunity to comment on the ***Final Draft of the Habitat Recovery Plan for Hood Canal/Eastern Strait of Juan de Fuca Summer Chum***. The sections that provide background and ecological context for the plan are very informative. The limiting factor analysis follows a clear and logical sequence in identifying the types of impacts that are occurring in the HC/ESJF and then rating their significance on potential summer chum habitat. Our comments on the plan are focused on the Skokomish Watershed Narrative (WRIA 16) and ways the link between factors for decline and factors for recovery could be strengthened.

FACTORS FOR DECLINE

Numerous studies have been conducted to investigate the impacts of the Cushman Hydroelectric Project on channel conveyance capacity, sediment transport, and the size and shape of the Skokomish delta. Several of these studies are cited in the discussion of factors for decline, but a review of additional studies that were not cited in the discussion would help to clarify the role of the Cushman Project in relation to other influences on summer chum habitat, including natural processes, timber harvest, road construction, and floodplain development. Consideration of additional information filed by Tacoma Power [Tacoma 1990, Tacoma 1995, Tacoma 1996] would provide the basis for a more accurate assessment of the causes for decline. It is important that the assessment be correct, since it will guide the selection of recovery measures. It is also important that statements about agency recommendations regarding operation of the Cushman Project be correctly represented, since their recommendations will directly affect what recovery measures can be implemented.

Page B-47, Low flow: The statement that the North Fork "*does not meet state water quality standards due to insufficient flows for habitat and high temperatures*" refers to a 1994 letter written by the Washington Department of Ecology (WDOE) which was based on data collected in 1985, at a time when no flows were released from Cushman Dam No. 2 [WDOE 1994]. The statement should be clarified to reflect that since initiation of 30 cfs minimum instream flows releases in 1988, water quality has met state water quality standards for class AA waters [Tacoma 1990]. Temperatures in the North Fork below Dam No. 2 range from about 4° C in the winter to about 12° C in the summer [Tacoma 1990]. These temperatures are similar to temperatures measured above Lake Cushman at Staircase.

The text states that the U.S. Environmental Protection Agency (EPA), U.S. Department of Interior (DOI) and National Marine Fisheries Service (NMFS) have agreed that the minimum instream flows necessary to protect aquatic resources in the North Fork are 84 percent of the natural average annual North Fork flow, which would be about 658 cfs. However, the current position of the DOI and NMFS is well summarized in a letter from NMFS to the Federal Energy Regulatory Commission (FERC) dated July 28, 1998 [NMFS 1998]. The letter states that the flow regime below "*would substantially restore natural North Fork streamflow and, thereby, has a high likelihood of restoring habitat of sufficient quantity and quality in the North Fork, main stem Skokomish River, and estuary to maintain self-sustaining populations of summer-run chum and chinook salmon.*"

Minimum base flow	240 cfs
Minimum annual outmigration flow	310 cfs from April 1 through May 31
Annual minimum attraction flows	300 cfs, two consecutive days per week, September 15 through November 23
Mainstem sediment transport flows	Ranging from 700 to 2950 cfs

These flows are recommended as interim flows, and the letter clearly states that monitoring would be needed to determine whether future flow adjustments should be made, but nowhere does the letter suggest that 658 cfs base flows constitute the minimum protection required for aquatic resources.

Page B-47, Sub-estuarine delta impacts: The text cites Jay and Simenstad (1996) in describing dramatic changes in the slope of the delta and the amount of eelgrass habitat, and attributes these adverse impacts entirely to the Cushman Project. In fact, their conclusions were based on a misinterpretation of measurements on contour maps and delta profiles as *feet*, rather than *fathoms*. This small error produced an enormous exaggeration of the extent of delta change over time. A review of other studies of the Skokomish delta [Simons & Associates 1995, Tacoma 1995, Tacoma 1996] indicates that delta changes have been no more than would be expected even in the absence of the Cushman Project; the delta has receded in some areas, shoaled in other areas, and the area of eelgrass habitat has probably been reduced 5 percent, at the most, from baseline (1888) conditions.

Although diversion of North Fork flows by the Cushman Project has certainly played a role in shaping the delta, tidal flows have a much greater influence than river flows in shallow estuaries such as the Skokomish, where tidal fluctuations are considered moderately strong [FERC 1996]. The observed changes are more likely related to clearcutting, road construction, and diking than to water withdrawals [FERC 1996]. Timber harvest in the South Fork since the early 1800s has resulted in significant erosion, with large sediment contributions to the mainstem, and an extensive system of dikes built early in the century has affected the movement of these sediments through the delta.

Page B-47, Water quality (temperature, nutrients): Although no reference is given, this section states that "*elevated temperatures may occur in the mainstem as well where water withdrawal along with aggradation and channel widening could influence peak temperatures.*" Elevated water temperatures in the mainstem have not been documented

to Tacoma Power staff's knowledge. Temperatures range from 5° C in the winter to about 11° C in the summer [FERC 1996].

FACTORS FOR RECOVERY

Reducing aggradation in the mainstem Skokomish, returning sediment transport to the delta, increasing eelgrass habitat, and restoring mainstem channel depth and conveyance are identified in the plan as important factors for summer chum habitat recovery. Tacoma Power agrees that improvement of these habitat characteristics would benefit anadromous fish. However, increasing minimum instream flows in the North Fork would not achieve these objectives. Studies conducted by Simons & Associates in 1995 and 1996 [Tacoma 1996] show that sediment load contributed by the South Fork is by far the major cause of aggradation, while the Cushman Project's contribution is approximately two and a half tenths of an inch per year. These studies also show that aggradation is a natural process in the Skokomish River system that will persist, regardless of what flow regime is implemented. These conclusions are supported in the Final Environmental Impact Statement [FERC 1996]. Studies conducted by Simons & Associates indicated that flows of about 200,000 cfs would be required to reverse aggradation under current sediment loads and channel conditions [Tacoma 1996].

Page B-50, Water withdrawal: The text should clarify what is meant by *"returning flows to the North Fork."* While the interim flows recommended by DOI and NMFS are likely to improve habitat conditions over the long term, they would not significantly reduce aggradation in the mainstem or increase sediment transport through the delta. As described above, reversing aggradation would require flows far higher than those recommended, which range from 700 cfs during the summer to 2950 cfs in the fall.

Page B-50, Sub-estuarine alterations: As described above, changes in Cushman Project flow releases would not significantly affect sediment distribution on the delta. Removal or modification of dikes, tide gates, and roadways would be much more likely to affect sediment movement. Tacoma Power's proposed management of the Nalley Ranch property on the Skokomish delta will allow continued erosion of the 1997 breach in the outer dike.

Page B-51, Channel complexity: As described above, changes in Cushman Project flow releases would not significantly affect aggradation that has occurred in the mainstem, or aggradation which will continue to occur in the future.

SUMMARY

The draft plan points out the importance of linking the factors for recovery to the factors causing decline. To bring this connection into better focus, Tacoma Power recommends that review of additional studies relating to the environmental effects of the Cushman Project be incorporated into the Skokomish River Watershed Narrative. Clearly, management of North Fork flows will play an important role in the recovery of summer chum and other anadromous fish, and Tacoma Power is a willing participant in efforts to improve habitat conditions in the watershed. However, it would be a mistake to assume that flow increases recommended by DOI and NMFS, or even a return to full run-of-river flows would have a

measurable impact on mainstem aggradation or sediment transport on the delta. Other restoration efforts identified in the draft plan such as managing sediment contributions from the South Fork, removing or modifying dikes along the river and on the delta, controlling development in the floodplain, excluding livestock from riparian areas, establishing wider riparian buffers, and extending timber rotations on forested uplands would have more direct and more significant benefits.

In the license application for Cushman Hydroelectric Project, Tacoma Power proposed the following measures to improve habitat for anadromous fish: (1) Increase minimum instream flows released from Cushman Dam No. 2 and implement spring and fall pulse flows to stimulate adult and juvenile migration; (2) Implement periodic flushing flows to remove accumulated silts and organic debris from pools in the lower North Fork; (3) Remove the diversion structure on McTaggert Creek and restore the original channel configuration; (4) Augment gravel at six sites to improve spawning habitat; (5) Enhance eleven side-channel sites to improve spawning, rearing and refuge habitat; and (6) continue to participate in the Mason County Flood Hazard Management Plan. Tacoma Power anticipates that these measures could contribute to habitat recovery for summer chum, as well as the Puget Sound chinook Evolutionarily Significant Unit (ESU). Unfortunately, the license, as issued, is not economically viable and is likely to be refused. Under such circumstances, the Cushman Project may be closed and funding for enhancement measures lost.

Thank you very much for this opportunity to comment on the Draft Habitat Recovery Plan. We hope that you will add Tacoma Power to your mailing list, and we look forward to receiving copies of the comprehensive plan that includes chapters on stock status, harvest management, and hatchery planning.

Sincerely,

Garth R. Jackson
Relicensing Coordinator

References

FERC. 1996. Final Environmental Impact Statement, Cushman Hydroelectric Project, FERC No. 460. FERC/FEIS-0095. November, 1996.

NMFS. 1998. Letter from Brett R. Joseph, Office of General Counsel, to David P. Boergers, Secretary, Federal Energy Regulatory Commission. July 28, 1998.

Simons & Associates. 1995. Response to Declarations by Watson, Simenstad, Dawdy, Phinney and Jay. June 19, 1995.

Tacoma. 1990. City of Tacoma. Final response to request for additional information of July 22, 1988. Cushman Hydroelectric Project, FERC No. 460. June 29, 1990.

Tacoma. 1995. City of Tacoma's reply to the intervenor's comments, recommendations, terms and conditions, and prescriptions. January 31, 1995.

Tacoma. 1996. The City of Tacoma's Comments on the Final Environmental Impact Statement. April 2, 1997.

WDOE. 1994. Letter from Gary E. Hanson, Section Supervisor, to Lois Cashell, Secretary, Federal Energy Regulatory Commission. October 27, 1994.

STATE OF WASHINGTON
PUGET SOUND WATER QUALITY ACTION TEAM
OFFICE OF THE GOVERNOR
PO Box 40900 • Olympia, Washington 98504-0900
(360) 407-7300 • FAX (360) 407-7333

May 14, 1999

Jay Watson, Executive Director
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376-5002

RE: Puget Sound Water Quality Action Team comments on the *Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan* of March 23, 1999

The Puget Sound Water Quality Action Team congratulates and commends the group of state and tribal fish biologists that produced the summer chum report, and thanks the Hood Canal Coordinating Council for its role in developing and distributing it. It is to the benefit of all residents of the Hood Canal/Eastern Strait of Juan de Fuca summer chum Evolutionarily Significant Unit that this document was issued within weeks of the listing of this species as "threatened."

Our comments address portions of the report other than the biological factors. It is our intent to contribute to the discussion of what a recovery plan for this ESU will look like and how it will be developed. The report can provide a framework for this discussion.

Section IV, the Protection and Restoration Strategy, would be an appropriate section in which to reference the Governor's Salmon Strategy for recovery planning and to mention the need to translate the biological recommendations of the report into programs and policies that local governments can consider adopting. The Governor's Strategy provides a programmatic review of laws, agencies, and activities that the state intends to coordinate and implement as part of the regional recovery strategy.

This report can serve as a starting point for discussion in the development of a regional habitat recovery plan that meets National Marine Fisheries Service (NMFS) goals for substance and certainty. State and local agencies and other parties can refine and build on the report, integrating policy information from the Governor's strategy, from local governments, and other parties.

The Action Team staff has the following comments on specific sections of the report:

Nearshore habitat

The work group has given appropriate attention given to this area of habitat. Although the report does not provide the detailed inventory of the nearshore habitat for the ESU that it does for fish-bearing streams, the report recognizes and addresses this frequently-neglected area. The report by Charles Simenstad is particularly helpful for providing information on the nature and significance of this habitat element.

We suggest that Dr. Simenstad's statement regarding the need of local governments for more inventory information on nearshore resources be added to the "tool kit" of strategies for protection of nearshore habitat. It can also be added to the implementation strategy for local governments and state agencies. Many local governments could provide improved protection under existing ordinances if the resource areas were identified on critical areas maps. Under updated critical areas ordinances and shoreline programs, protection of these resources would also be based on a comprehensive inventory.

IV. Protection and Restoration Strategies

Low Flow - Protection and restoration strategies for improving low flows should consider the importance of stormwater management in promoting the infiltration of surface water. In many basins this shallow groundwater contributes to the duration and volume of base flows during the dry season when many streams can fall below minimum flows for fish needs. Infiltration also may contribute to ground water recharge and reduce the need to withdraw surface waters for public supply.

Water Quality - The *Puget Sound Water Quality Management Plan* identifies programs for water quality protection under state agencies, such as the Department of Ecology's stormwater program for overall nonpoint source pollution and the Department of Health's On-Site Sewage Operations and Maintenance program, where nutrients are involved. The plan provides the framework for a regional, coordinated approach to water quality improvement and protection, and can serve as a source of information regarding the roles and responsibilities of different agencies, state, local, and federal, in addressing water quality in Puget Sound. The roles of many of these agencies are outlined in the Governor's Salmon Strategy, as well.

For example, the *Puget Sound Water Quality Management Plan* established timelines for adoption of stormwater programs which some jurisdictions have not met. The Department of Ecology with support by the Action Team is involved in promoting the implementation of these programs on the local level. Stormwater management programs, including education and enforcement, are key to addressing a number of the water quality concerns raised in the analysis.

The conditions documented in the report provide a basis for implementing regional water quality strategies to address water quality limitations to salmon survival. The next step in a recovery plan is to build on the report's recommendations with the nonpoint source pollution control strategies and programs that exist, improving them where needed, and accelerating their implementation.

Sediment - While the report mentions clearing and grading standards, stormwater management should be a protection and restoration strategy. Stormwater standards for erosion and sedimentation control during construction are necessary to prevent high volumes of sediment from entering surface waters. This is being accomplished through stormwater programs, the Basic Stormwater Programs for less populated jurisdictions and Comprehensive Stormwater Programs for more urbanized jurisdictions.

V. Strategy for Monitoring Population and Habitat Recovery

The points raised in this discussion relate to the need for monitoring that is multiscale, long-range, involves diverse entities, and allows for adaptive management. This is a complex and difficult issue, and developing reliable models for evaluation of results may take years. Monitoring and adaptive management of the multiple land use factors and restoration techniques suggested by this report will require collaboration among fish biologists, land use planners and scientists in other disciplines. We recommend that the working group continue to work on this task by expanding the Technical Advisory Group to include these experts. It is important to begin to develop the models for monitoring, evaluation, and adaptive management programs as soon as possible. A question of particular importance in long-term recovery is that of the relative priority between regulation and acquisition given a limited amount of funds.

VI. Implementation of Habitat Elements

The section defining the roles of various parties needs to be refined and expanded. To some degree, this can occur through the integration of the strategies with elements of the Governor's Salmon Strategy. To some degree, local governments and other parties will assist in defining both what actions they can take and what support they need to achieve those actions. Our comments on this section are not intended to be comprehensive, but attempt to give direction as to what kind of information is needed. The following suggestions are made to the section regarding roles of various parties:

Hood Canal Coordinating Council
Clarification of role:
1. The HCCC has been identified as the lead entity for salmon habitat recovery planning for the summer chum for Hood Canal and eastern Jefferson County.
2. Funds for restoration projects will be disbursed directly to project sponsors. The awarding of funds will occur at the Interagency Review Team. The Hood Canal Coordinating Council (and the North Olympic Salmon Restoration Lead Entity for Clallam

County) will prioritize the restoration projects under 2496 and pass them on to the state for review and funding decisions.

Local governments
It may be important to include the need for improved enforcement of local land use ordinances in some areas. In addition, the role of local government in WRIA planning should be mentioned.

Tribes
The role of tribes as partners in WRIA planning should be included.

State Agencies:

- Department of Ecology - Add: Implement stormwater programs, enforce state water quality standards, conduct Total Maximum Daily Load (TMDL) analyses, lead watershed planning efforts so as to integrate with salmon recovery. Ecology's enforcement role in water rights and the Shoreline Management Act should also be included.

- Add: Department of Community, Trade, and Economic Development - as the agency guiding local government in implementation of the Growth Management Act, this agency has an important role.

- Add: Department of Health - In areas where fecal coliform nonpoint pollution contributes to nutrient loading (p.22), the Department of Health may have a role in implementing On-Site Sewage System Operations and Maintenance Programs. In addition, the DOH may play a role in water conservation programs as discussed on page 19.

- Add Department of Agriculture - The Governor's Salmon Strategy outlines a role for this agency in regulating agricultural practices, working with the NRCS to implement the CREP program (p.21), and activities of the Conservation Commission and local Conservation Districts.

- Add: Puget Sound Water Quality Action Team - The Action Team has an adopted and updated Management Plan and Work Plan that contain programs and recommendations to address many threats to salmon. Action Team staff can provide agency coordination, technical assistance, and public education. The Action Team's Puget Sound Ambient Monitoring Program includes monitoring, updates, research conferences, and proceedings regarding Puget Sound conditions.

- Add State legislature and Governor - A number of recommendations in this report will require changes in current state law. The Governor's Salmon Office and the Joint Natural Resources Cabinet should also be included.

Conclusions

The scientific information, data, and analysis that comprise the watershed factors for decline and factors for recovery are an invaluable tool in restoration and protection of salmon habitat for the summer chum. This information will enable project sponsors to develop clear project goals and designs that address factors for decline in a cost-effective manner. The priorities for restoration in each watershed will contribute significantly to coordinated and successful recovery. We are fortunate to benefit from the foresight and hard work of the tribal and state biologists who produced this report.

The development of a regional habitat recovery plan required to address the factors for decline will be accomplished by a number of state and local agencies, tribal governments, and others, and will develop through a regional discussion among interested parties. We welcome this report as a beginning of that discussion, and we appreciate the role of the Hood Canal Coordinating Council in bringing this report to the public for review. It would be beneficial if the Council were to circulate a document containing all the comments received on the report as part of the regional process for creating a recovery plan. If the Council can coordinate and lead the regional discussion and the development of a final habitat recovery plan as a product of the discussion, it will be an important contribution.

We wish to thank the Hood Canal Coordinating Council for providing us with the opportunity to review and comment on the report. We look forward to continuing to work with the Council in this ongoing process to recover the summer chum salmon of the Hood Canal/Eastern Strait of Juan de Fuca ESU.

Sincerely,

Harriet Beale

Harriet Beale
Local Liaison for Kitsap, Jefferson, and Clallam Counties
Puget Sound Action Team

FISHERIES DEPARTMENT
Area Code (360)
598-3311
Fax 598-4666

THE SUQUAMISH TRIBE
P.O. Box 498 Suquamish, Washington 98392

May 17, 1999

Jay Watson, Executive Director
Hood Canal Coordinating Council
PO Box 5002
Quilcene, WA 98376-5002

RE: Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan

Dear Mr. Watson:

Thank you for your efforts in developing this plan. The authors illustrated habitat complexity and the complexity of how habitat is degraded. Their analysis is grounded in natural resource professional knowledge and experience working in the local area, which is helpful. This plan is unusual because its focus is on chum recovery, rather than how to achieve chum protection while pursuing some other objective.

The actual protection or movement toward recovery is not a part of this plan however. Recovery will require specific actions for which there is at least some accountability. How gaps in resource protection would be accomplished, by whom and when are missing.

How would the gaps between existing regulations and best available science be bridged? How, for example, would the recommended buffers and better enforcement be accomplished? Who would conduct the monitoring listed in Table 5? A process is needed to answer monitoring questions and take actions to correct identified problems.

Accountability is needed to make implementation of the plan effective. Expanding on the work already done, especially in the implementation section, could correct this omission. Actions in the Upper Hood Canal Watershed Action Plan could be part of a more specific recovery plan. Recommendations provided by the Northwest Indian Fisheries Commission (especially regarding roads) should also be added to a more specific recovery plan. In summary, the plan is a good start, but the work to develop an effective recovery plan is not done.

Sincerely,

Phyllis Meyers

Phyllis Meyers, Fisheries Environmental Program Manager
Cc: Randy Hatch, Fisheries Director
Merle Hayes, Fisheries Policy Coordinator

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

May 17, 1999

Jay Watson
Hood Canal Coordinating Council
PO Box 5002
Quilcene, WA 98376

Dear ~~Mr. Watson~~ Jay:

Re: Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan

Thank you for the opportunity to review the March 23, 1999 Final Draft of the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan. Enclosed is a copy of Department of Ecology's comments. Congratulations to the plan authors for preparing this well thought-out, comprehensive protection and restoration plan. I know it will be a model for the many salmon recovery plans which will be needed in western Washington in the near future.

If you have any questions regarding Ecology's comments, please contact me at (360) 407-6556 or by e-mail at jbar461@ecy.wa.gov. We look forward to continuing to work with all the jurisdictions involved in this important effort.

Sincerely,

Jeannette Barreca

Jeannette Barreca
Water Quality Program
Southwest Regional Office

Enclosure

Comments from the Department of Ecology on the March 23, 1999 Draft of the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan

Reviewers included Jeannette Barreca, Vicki Cline, Sandy Lange, Cris Matthews, Joanne Schuett-Hames, Jeff Stewart, Pat Svoboda, and Kim VanZwalenburg

General

The plan clearly describes the many sub-populations (stocks) of the summer chum in this ESU and nicely tailors a plan that allows specifics for the individual stocks to be understood and addressed. At the same time, it also pulls together the general life histories and habitat information of importance to most populations throughout the ESU.

It also does a great job of using what is known at this time on the use of the estuarine system for the chum fry. This could be the basis of a key education piece and of fundamental importance for all shoreline related issues in the canal in particular.

Specific Comments

Executive Summary

[Bottom of page iii] Floodplains...

Diking of rivers to protect property cuts off the channel from its floodplain and hastens the fresh water to the salt water (Hood Canal, Puget Sound). This water is not able to recharge aquifers or to contribute to later, summer in-stream flows. The added velocity of the channelized river does additional scouring to the river bed and can ruin redds and kill eggs, eyed eggs and fry by burying and smothering in bottom materials.

IV. Protection/Restoration Strategy

B. Tool Kit of Protection/Restoration Strategies by Habitat Parameter

Flow

[Page 19] A. Low Flow

The plan is a very good formula and does not politicize the costs of summer chum recovery. It suggests that in order to ensure adequate, clean consistent water, Ecology needs to condition all water rights on instream flows. This is difficult on decisions already made unless a purveyor requests a change application. It is surprising that the plan does not require Ecology to enforce existing water rights as well as future water rights. Enforcement against illegal users will likely benefit instream flows.

Instream flows and closures have been established within WRIA 14 and 15. An investigation of impact of existing exempt wells could be measured by applying a guidance value of 450 gallon per day per well. If someone applies for a water right permit for an exempt well in a basin Ecology knows has problems meeting instream flows or has closures, we can condition/provision it for in-house use only. On existing permits and certificates Ecology is now initiating collection of metering and use data. WRIA 16 does not have instream flows established by WAC, but we can provision permits based on recommendations from WDFW and other past written recommendations. By law (WAC 173-152) Ecology works on the oldest application first in each watershed as time allows.

It is not known how many exempt wells there are. One place to start is the well log records submitted by the drillers. Some exempt wells may not even have a well report on file. It is rare that exempt wells have a permit or certificate. Another place to look is the claims register. Ecology has just initiated scanning of well reports, which will make it a little better to access the information. Unless it is known that the ground water that is intercepted discharges directly to the Sound there is in all likelihood hydraulic continuity with surface waters especially in the upper reaches of the watershed.

Impervious surfaces affect both peak flows and low flows. Road and impervious surface storm runoff is not available to groundwater recharge (and therefore not available for summer flows). This could be referenced to the strategies and actions under Peak Flows.

[Page 20] Peak Flow

Consider adding to Protection Strategy No. 2: "Evaluate roads for opportunities to disperse water to the ground instead of into ditches and storm conveyance systems. Implement results of evaluation."

Water Quality
[Page 21] A. Temperature

This section should probably cross-reference the sediment section on pages 23-24, since aggradation from forest roads leads to wider and shallower channels which are prone to higher temperatures. The problem statement could mention that increases in temperature lead to lower dissolved oxygen levels.

There is a typo in the second-to-last line of paragraph 1: "additional"

B. Toxics

There are probably conditions under which a business that "produces" toxic materials could safely locate within the summer chum ESU without threatening water quality.

[Page 22] C. Nutrients

There should be a tie-in between excess nutrients and low dissolved oxygen in the problem statement, since DO is listed as the habitat factor impacting chum salmon in Table 1. Maybe an additional sentence could say, "An increase in primary productivity increases organic material in the system, which depletes dissolved oxygen when it decays."

Protection Strategies 1 and 2 both appear to address critical areas and high groundwater tables, but the strategies are different. Current health regulations should protect summer chum from impacts of new septic systems, but maybe regulations that allow variances could be more restrictive.

Regarding placement of new landfills, current federal, state, and in some cases local standards for new landfills prohibit hydrologic contact with ground or surface water. There could be a statement that any proposed solid waste disposal facilities must comply with all existing and appropriate location, design, and environmental protection standards.

Sediment
[Page 24, first paragraph, first full sentence]

Shouldn't this statement read, "The capacity to route sediment is increased by channel straightening and LWD removal." ? instead of decreased? Alternatively, it could be changed to "The capacity to ~~route~~ store sediment is decreased...."

[Page 24] **Riparian Forests**

This section could mention that riparian buffers help protect water quality in the stream. Under Protection Strategy No. 4, perhaps the document should specify a minimum no-grazing buffer in the riparian forest even when there is an approved farm management plan. There seems to be wide variation on how Conservation Districts are interpreting the applicability of the new Natural Resource Conservation Service Standards for riparian forest buffers.

Subestuarine Habitat
[Page 27] Restoration Options No. 1: (sp) anthropogenically instead of anthopogenically.

Nearshore Habitat
[Page 27] Problem statement should also include language like:

"Also of concern are homes and other structures built too close to the water, which leads to the necessity for protective bulkheads. Adverse impacts of bulkheads continue to accumulate, fundamentally altering the habitat values, whether or not their installation will resolve the bluff stability and erosion problems caused by locating structures too close to the edge. In some areas, over-water structures result in chronic, significant impediments to fish passage, and in some case, water quality degradation."

Protection Strategy No. 1: It is not clear whether the "Shoreline Management Master Plan" refers to the Shoreline Management Act or the local Shoreline Master Program (SMP). The procedural exemption for bulkheads and piers and docks is set out in the statute (90.58 RCW) and will require legislative action to effect any changes. However, the Mason County SMP is currently undergoing a re-write. Local SMP's may include more stringent standards regarding bank stabilization alternatives including increased setbacks, requirements to identify actual rates of erosion, threat to the residence etc.

Protection Strategy No. 2: One of the main permit requests along Hood Canal is for bulkheads to protect homes from steep slope erosion. This practice needs to, and is being examined by all jurisdictions in Kitsap County, with staff recommending "soft solutions" instead. The toe-of slope bulkheads often do not afford protection to homes built on eroding slopes. Top of slope vegetation removal, clearing, grading and poor drainage in often to blame. They need to address these things as well as wave action erosion, which often does not contribute much to their problem. These bulkheads can cut off materials to the beach if they are feeder bluffs, depriving the nearshore area of the very bottom of the food chain elements.

The slopes themselves should be planted with native vegetation to encourage a healthy nearshore/onshore ecosystem.

[Page 28] Under Protection Strategy No. 3, "pressure treated wood products" should be expanded to 'chemically treated wood products," since used creosote pilings are still being used in some areas. It is possible to minimize the use of treated wood through standards in the SMP. For example, from the Tacoma shoreline administrator came this recent example:

> The City of Tacoma Shoreline Master Program and the implementing development regulations set forth in the Tacoma Municipal Code (TMC Section 13.10.175)contain limitations on the use of creosote treated piling in the marine environment. TMC subsection 13.10.175.14.a.(9) states the following regarding piers, wharves, docks and floats:
>
> (9) Pilings for newly constructed piers, wharves, docks, and floats shall be of materials other than treated wood. The aforecited prohibition does not apply to fender systems, mooring bollards, dolphins, batter walls or wing walls; nor wood treatments deemed acceptable in the future by State and Federal agencies with expertise. For replacement of more than 50 percent of the pilings in an existing pier, wharf, dock, or float, materials other than treated wood shall be used unless extreme adverse economic or engineering impacts can be demonstrated. The exceptions listed above also apply to this limitation.

Strengthening requirements for joint use docks can also be accomplished in the SMP.

Protection Strategy No. 4: "Low bank and no-bank buffers should be determined by habitat value and shoreline environmental designation, with a 35-foot minimum buffer requirement." This minimum will be hard to justify for maintenance of shade/cover, wood, bank integrity and long-term maintenance of the buffer qualities. Where do the proposed numbers come from for shoreline vegetation buffers? Any standards should be scientifically defensible. The new WAC, 173-26 WAC Shoreline Master Program Guidelines, which Ecology is proposing relies on Best Available Science (as does the GMA) and is currently in the public comment period. If adopted, local SMP's will have to be rewritten to bring them into compliance with the new guidelines.

Also under Protection Strategies, along with the language on vegetation buffers some of the following could be woven in:

"A careful evaluation of setback requirements should be undertaken by all jurisdictions. the existing requirements should be compared with geophysical properties (landslide hazard zones, etc.) of the shorelines where those setbacks are applied."

Generally speaking, requiring structures to be set further back will result in significant environmental improvements. Deeper setbacks will also afford long-term benefits to residents, whose homes will be safer, and less expensive to protect with aggressive measures like retaining walls and soldier pile installations. Such measures further degrade the nearshore habitat.

"Shoreline master programs should make explicit that bulkhead proposals shall be carefully evaluated, and carefully define criteria for determining when is truly necessary for protection of residential structures. These should include criteria such as distance from Ordinary High Water, degree of compaction/composition/consolidation (hardness) of soil, and calculations of the projected rate of erosion. Applicants should also be required to demonstrate their shoreline armoring is designed to avoid scouring effects on adjacent properties. Master programs should also list reasons/conditions, other than protection of residential structures, where bulkheads may be permitted."

"Another improvement would be establishing permanent buffer zone easement dedications as a compensatory mitigation requirement whenever shoreline armoring is permitted."

"Because construction over bluffs causes slope stability problems and intertidal habitat disruption, Shoreline Master Program revisions should make it difficult for individual homeowners to construct single-family stairtowers, requiring Conditional Use approval and using economic or other incentives to encourage joint or multiple use facilities for gaining access to the beach."

[Page 29] C. Evaluation Criteria for Proposed Restoration Projects within the Summer Chum ESU.

Evaluation Criteria No. 2, Extinction Risk: This notes it is from the Extinction Risk Assessment, Part I. This must be in an overview document that will enjoin the hatchery and harvest parts? This category carries a lot of potential points. Whereas giving more points to stocks with highest risk of extinction should be a first priority (which this does), we would encourage a system that joins the next highest risk of extinction stocks with the Union Creek healthy stock as a next in line priority.

[Page 31] **V. Strategy for Monitoring Population and Habitat Recovery**

What is the expected timeline to determine if a recovery is successful? If the plan is being followed and after twenty years, there are no fish....is the plan still worthwhile or is there an agreed upon concession that development and man has destroyed the ability for the summer chum to recover?

[Page 33, Sediment] Fine sediments in spawning gravel is one of the habitat factors for decline. Consider including this parameter as a sediment monitoring component.

Riparian Forest, No. 13: Plant mortality, not plant morality

VI. Implementation of Habitat Elements of Summer Chum Recovery Plan

[Page 37] Local governments (Counties, Cities, PUD's)

Within the next few years these governments will be developing local ordinances to allow them to take over forest practices jurisdiction from DNR in consultation with Ecology, for forest lands being converted to another use. Recovery plan objectives and strategies should be incorporated where issues are appropriate, into these new county ordinances.

All jurisdictions with shoreline areas should be required to review their tax codes and eliminate provisions or criteria which make bulkhead installation or proximity to the water an economic incentive. Currently, adding bulkheads and building closer to the water makes property more valuable. Removing this economic incentive could have a major positive effect, encouraging more environmentally sustainable waterfront development practices.

The document would be more clear if certain references were spelled out. E.g. under the Counties/Cities bullet, provide the name of Section IV B, "Tool Kit of Protection/Restoration Strategies by Habitat Parameter."

There is a typo under bullet no. 1: **and** Stormwater Ordinances

State agencies (DNR, DOE, WDFW, WADOT)

- DNR (Department of Natural Resources):

Possible addition: "Establish stronger working relationships with sister agencies on TFW applications which include Shorelines of Statewide Significance. Agreements are needed about which agency ensures compliance with RCW 90.58 as it applies to buffer zones and cutting limitations in these areas. Ideally, DNR field staff, who are working daily with the logging industry and know the terrain, should have a significant role in ensuring SMA compliance."

Another need is to reach agreement between the field staff in DNR, Ecology, and WDFW on how the Ordinary High Water Mark is determined. Although the regulatory language for each agency is the same, field staff apply the language in significantly different ways. This is confusing to landowners, and it results in significant habitat disruption in key areas. For example, areas flooded on an annual basis, wall based channel habitat which may be hundreds of feet inland from the scour line of the current main channel, Ecology will sometimes determine to be within the Ordinary High Water Mark, whereas DNR would have made the call at the scour line. The implications of these differences have broad significance, economically, environmentally, and politically.

Note that the DNR listed role of evaluating the adequacy of forest practices rules is actually by RCW our regulation. Perhaps, under DOE we can include similar wording..."Evaluate and monitor effectiveness of forest practices rules."

- DOE (Department of Ecology):

Provide information on, and adopt updates to SMA jurisdictional areas.

Also, for Ecology, "Develop TMDLs for water quality and habitat parameters that are identified as limiting factors for summer chum."

[Page 38]

- WSDOT (Washington Department of Transportation)

There is also a need for improvements in coordination between WSDOT and the resource agencies. Improper usage of shoreline permit exemptions have been commonly demonstrated on numerous projects over the preceding years, and in some cases, significant and preventable habitat disruptions have resulted. One idea is that shoreline master program amendments (under Counties/Cities) might include specific language to clarify which transportation projects are and are not exempt.

Non-governmental entities: Add the names "Salmon Recovery Act" for HB 2496 and "Watershed Planning Act" for HB 2514. Typo: delete apostrophe in "Conservation District's."

[Page 40] **Table 6.** Summary of habitat protection laws

Washington State Forest Practices Act. ADD to Jurisdiction, Washington Department of Ecology. (WDOE co-adopts as WAC 173-201A.)

State Environmental Policy Act – Jurisdiction should be "Local government/Washington State Department of Ecology/other state agencies."

Glossary
[Page 43-44] The definition for Shoreline Management Act is good as far as it goes. You may want to add:

"A fundamental principle of the Shoreline Act is to protect the resources and ecology, and protect the natural character of Washington shorelines. The Act is also specifically designed to enable all interested citizens and groups to actively participate in land use decisions involving waterfront areas."

Union Watershed Narrative
[Page B-56] *Water Quality*

Although outer Lynch Cove cadmium and arsenic levels in 1992 were the highest of all Puget Sound Ambient Monitoring Station sampled that year, the levels were still below state sediment quality standards. Likewise, chromium and copper levels, although elevated, were below state sediment quality standards.

Other comments:
Hopefully the supplementation plan will answer the following questions: What is the calculated success rate for each river? The plan states that some rivers the fish need to be reintroduced, other are on the decline. With this plan, what is the expected rate of recovery over time? For chum being reintroduced, at what location in the river will this occur?

BOARD of COMMISSIONERS
JEFFERSON COUNTY WASHINGTON

1820 Jefferson Street
P.O. Box 1220
Port Townsend, WA 98368

Dan Harpole, District 1 Glen Huntingford, District 2 Richard Wojt, District 3

May 18, 1999

Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376-5002

RE: Hood Canal Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan
Final Draft, dated March 23, 1999

On behalf of Jefferson County, the Board of County Commissioners would like to thank the authors for their work on the Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan ("the Plan"). The Plan is a critical piece that will be used as a tool to protect and restore summer chum salmon to Hood Canal.

COMMENT SUMMARY

Our comments and concerns are detailed below. In general, we believe that the basis for all recommendations and policy changes must be clear and well supported by science. Without this, the public may not buy into the process or support the changes that will be required to protect and restore salmon habitat, nor will the Plan sustain legal challenge. Additionally, we urge the authors to realize that local flexibility can be as protective of habitat as prescriptive standards if monitoring and enforcement are ensured.

Finally, we would like to add a general comment regarding the desire of the authors and Jefferson County to use best available science. The use of anecdotal information, while valuable to add to the historical record, will leave the summer chum report more vulnerable to scrutiny. We recommend that the authors remove the anecdotal information because otherwise the report will be open to criticism that will detract from the sound science in the remainder of the report.

DISCUSSION

As a local government, Jefferson County will be responsible for implementing policy via ordinance, therefore, the focus of our comments are directed toward the section of the Plan beginning on page 19 entitled "Tool Kit of Protection/Restoration Strategies by Habitat Parameter".

Page 19 *"Local governments may have to restrict building permits or use some other measures in areas where exempt wells are potentially in hydro logic continuity with streamflow."*

While we support recommendations for protection strategies for low flows, the state Department of Ecology ("DOE") is the agency that has the legal authority to limit water withdrawals. Under current state regulations, local governments do not restrict building permits due to ground water appropriation concerns because state law currently allows property owners to withdraw ground water utilizing an individual well. Jefferson County would support limitations on building permits only after the DOE makes a legal determination that water is not available for appropriation, and has delineated areas of concern where ground water is in hydro logic continuity with surface water.

Phone (360)385-9100 / 1-800-831-2678 Fax (360)385-9382 jeffbocc@co.jefferson.wa.us

Page 20 *"Establish a maximum total impervious surface rate of 5% for all basins and condition land use permits consistent with the threshold."*

Through the Comprehensive Planning process in the last five years Jefferson County has already downzoned a large portion of its rural lands. For example, the Comprehensive Plan adopted on August 28, 1998, zones 5-, 10-, and 20-acre minimum lot sizes for residential use, as well as designating Natural Resource lands sized at 20, 40 and 80-acres for Forestry and Agricultural purposes, throughout the County. We believe that in most basins in Jefferson County, limits on impervious surface areas can be met without conditions on individual permits through appropriate planning and rural zoning designations. The Plan recommendation is a watershed-scale recommendation and zoning should be the first tool applied to this task. In areas where patterns of development may allow impervious surfaces to surpass maximum thresholds, site development standards should be required. Impacts are mitigated through appropriate planning and development standards.

We are concerned that the authors of the Plan reached conclusions from the May et al (1997) study regarding impervious surfaces that are different than the conclusions that our staff reached when reviewing the document. The study by May et al. (1997) uses streams from the Puget Sound Lowlands to assess the current conditions with aquatic habitat in relation to the watershed development. The authors of the Plan should note that, in terms of peak flow, May et al. reads, "Urban streams (>40% TIA) had significantly larger Max:Mean and Max:Min flow ratios than rural streams (<15% TIA)." In May et al., the threshold of 5% impervious surface is discussed in terms of correlation with reduced levels of LWD; from our analysis, May et al. (1997) have not correlated peak flows and the 5% impervious surface threshold indicated by the authors of the Plan. The authors of the Plan may wish to move the 5% maximum impervious surface recommendation to the section of the Plan regarding LWD, or should modify the recommendation on peak flow to a maximum of 15% impervious surface to concur with the findings of May et al.

Page 20 *"Minimize stormwater runoff by... retaining at least 60% of a watershed in native vegetation".*

Peak flow problems have been rated as high on Salmon Creek and Snow Creek, moderate on Chimacum Creek, the Little Quilcene River and the Big Quilcene River. All of these basins have forest practices in upper watersheds that contribute to peak flow problems. Protection strategies should not focus solely on development.

We would like the authors to address whether the Plan recommendation to retain 60% of native vegetation and minimize stormwater runoff would be consistent with the existing forest practice rules. Additionally, we recommend that the authors cite peer-reviewed scientific studies that support the unpublished materials in order to provide credibility to this Plan recommendation. We would also like the authors to clarify what is meant by the term "native vegetation".

Page 20 *"Infiltrate all stormwater runoff onto the forest floor or, if not available, in retention ponds prior to entering the stream network."*

While we agree that stormwater retention is a serious problem for fish habitat, the recommendation to "infiltrate all stormwater runoff..." should be changed to "mimic natural stormwater flow by using retention ponds, grassy swales, and created or restored wetlands as much as practicable."

Page 20 *"Minimize the width of new roads and limit the overall density of the road network within the watershed."*

We recommend this item be struck from this Plan. At the very least, it should be reworded to reflect the concern about the impacts of development and impervious surfaces on salmon habitat. We suggest something like "New roads shall be designed and constructed using techniques that minimize watershed impacts. Such techniques could include but not be limited to use of narrow roads where appurtenances can be accommodated as a separate facility."

Page 21 *"Prohibit new industrial waste sites and businesses that produce toxic materials from locating in watersheds within the summer chum ESU."*

Current law does not allow the discharge of hazardous materials into the environment that will impact water quality. It is not clear if the authors meant to exclude all sites where toxic materials are used or stored (which would include businesses like autobody shops, dry cleaners, and retail stores) or only sites where hazardous materials or wastes have a great potential to negatively impact habitat. The authors should clarify their recommendations on this point and should change the phrase "toxic materials" to "hazardous materials" so that it is clearer what is meant from a regulatory standpoint.

Page 22 *"Prohibit the construction of new septic systems within the riparian forest and in areas with high ground water tables."*

Jefferson County does not permit septic systems where the ground water table is less than 12 inches below the ground surface. Advanced effluent treatment (i.e., alternative systems) is required when the ground water table is less than 48 inches below the ground surface. Studies indicate that vegetated buffer strips of 100 ft or greater can remove up to 90% of the nitrogen and phosphorus thereby reducing the potential impact to nearby streams. Please clarify is meant by "high ground water tables" in this Plan recommendation.

Page 22 *"In sensitive areas or areas of high water tables, require containment and pump-out septic systems that do not discharge to groundwater"*

State law does not allow permitting of residential holding tanks. Since 1990, Jefferson County has required a program of mandatory inspections of alternative systems. This is more effective than attempting to monitor compliance with pump-out schedules. Additionally, in critical aquifer recharge areas, the Critical Areas Ordinance allows only alternative septic systems that are capable of removing 50% or more of the nitrogen from the waste stream to be permitted in critical aquifer recharge areas.

Page 22 *"Prohibit the construction and placement of new landfills within the summer chum ESU because landfills are generally in hydro logic contact with surface or groundwater."*

The authors need to specify the type of landfills to which they are referring. Impacts from inert waste landfills should not be confused with potential impacts from solid waste or hazardous waste landfills that are not in compliance with existing minimum standards. Other solid waste activities such as biosolids processing may have more impact on sensitive ecosystems than do landfills.

Waste must go somewhere and it may not be possible to completely eliminate potential sites in the entire ESU. The authors should modify the landfill language to specify that "All waste handling facilities shall be operated and maintained in a manner which ensures no hydro logic connectivity with surface or ground water. Monitoring should be implemented to the extent necessary to ensure that this goal is achieved."

Page 23 *"Eliminate bank armoring with riprap, diking, dredging, and gravel removal."*

The state's Shoreline Management Act allows an exemption from the Shoreline Substantial Development Permit for bank armoring to protect single-family residences. Jefferson County has development regulations within its Shoreline Master Program regarding bulkheads but the County cannot eliminate the exemption entirely because the Shoreline Management Act supercedes the Shoreline Master Program.

The authors should acknowledge that state law permits some maintenance dredging for existing marinas. The County does not have the authority to prohibit an activity that state law allows. In rivers and streams diking and dredging are **generally, but not always,** problematic for fish habitat. Some specific fish recovery plans specify that diking or dredging should be done to improve conditions for summer chum or another salmonid species (e.g.,

the Department of Public Works currently excavates "gravel traps" on the Big Quilcene which have proved beneficial to salmon). The author's statements should reflect that these activities should be allowed when they are beneficial for salmon recovery efforts or are a part of an approved flood plan.

Page 23 *"Prohibit new development within the 100-year floodplain or... (FEMA) floodplain designation, whichever is greater."*

Jefferson County currently uses FEMA and FIRM maps to define the 100-year floodplain. More accurate information is needed for a clearly delineated 100-year floodplain that is legally defensible. Traditionally the definition of the floodplain, and regulations which address subsequent development within the floodplain, have been based on protecting the development itself, not fish habitat. Perhaps a different definition for the floodplain should be determined in context of fish habitat needs so that the local government is not left trying to apply data from one source (FIRM maps) for regulation of an unrelated goal (fish habitat). It seems appropriate to determine this 'fish habitat floodplain' by a different type of measurement, such as doubling bank-full width.

The authors should define what is meant by "development". Development activities to restore habitat and development activities that are protective of habitat must be allowed.

Page 24 *"Prevent the entry of fine sediment into any stream channel, wetland, or ditchline connected with the stream network through improved clearing and grading standards."*

In some systems, such as Chimacum Creek, there are high natural inputs of fine sediments into streams from parent soil materials. We are not sure that the authors meant to imply that natural inputs of fine sediments into streams should be excluded. There are no actions that could be taken to prevent fine sediment entry into streams. We believe that the authors meant to express that excessive sedimentation is problematic.

Some ditchlines are designed to trap sediments (biofiltration swales). The authors should acknowledge that it is appropriate for stormwater to be routed through ditchlines to allow for biofiltration. However, this is not meant to imply that stormwater water will be discharged directly into streams.

Page 25 *"Protect riparian forests with a fully functional buffer. A fully functional buffer is defined as 250' measured horizontally from the landward edge of the channel migration zone or the 100 year floodplain (whichever is greater). For seasonal streams, the buffer width should equal that of a site potential tree height (SPTH) measured horizontally from the edge of the ordinary high water mark."*

The authors have defined a "fully functional buffer" as a prescriptive width of 250 feet. We agree with the authors that a fully functional buffer is vital to protecting habitat. A fully functional buffer is one that contributes to a healthy aquatic habitat for chum salmon by providing: Shading to keep stream temperatures low; Biofiltration to reduce fine sediment inputs into the stream or river; and, Maximal recruitment of large woody debris into streams and rivers. Buffer width recommendations should include protection of associated wetlands and side channels, even if those features are not directly associated with the channel migration zone.

The authors of the study relied upon the Pollock and Kennard 1998 literature review of buffer width requirements to protect stream habitat. Upon our review of the Pollock and Kennard study, it appears that their conclusions were not supported by their source literature. To add credibility to the findings and the recommendations in the Plan, the authors should review the source literature from Pollock and Kennard's study and resolve the discrepancy.

Jefferson County needs to have buffer requirements that reflect the needs of different types of aquatic habitat. This means that a "one size fits all" recommendation might not be effective for managing riparian forests in a manner that protects summer chum salmon; flexibility in buffer width requirements allows counties to protect the critical aquatic habitat functions of streams and rivers with the likelihood of better landowner cooperation.

Page 25 *"Restrict road building and development within the defined riparian buffer."*

In several locations, the authors have referred to "development". We are aware of several legal definitions of development. For example, Jefferson County's Comprehensive Plan defines development as "Any man-made change to improved or unimproved real estate, or in use, or extension of the use of the land for any purpose including, but not limited to, construction, reconstruction, conversion, structural alteration, relocation, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or vehicles." The authors should explain what is meant by the term "development" in order to clarify what activities are of concern for salmon protection and recovery.

Page 26 *" Prohibit the placement of new roads and culverts within the historic range of summer chum or provide adequate mitigation for unavoidable projects."*

The phrase "unavoidable projects" should be deleted because of its vagueness. We recommend replacing it with "Road construction should contain mitigation to minimize impacts within the summer chum ESU."

The phrase "summer chum zones" should be defined more clearly because we are unclear about how it differs from the "summer chum range."

Page 27 *"Remove the Shoreline Management Master Plan permit review exemption for construction of bulkheads, piers, and docks associated with single family residences."*

This recommendation would require a change to the Shoreline Management Act and should be directed to the state. In Jefferson County, however, these projects are nonetheless subject to the requirements of the Shoreline Master Program and to public notice and comment. Local project review requirements for a shoreline exemption include: notice of application, review under the Critical Areas Ordinance, review under SEPA, consistency with the Hydraulics Project Approval, and, in some cases, a building permit. Docks in Jefferson County are rarely exempted.

Page 27 *"Prohibit the construction of new bulkheads along shoreline areas..."*

This recommendation would require a change to the Shoreline Management Act. The state's Shoreline Management Act allows an exemption from the Shoreline Substantial Development Permit for bank armoring to protect single-family residences. Jefferson County has development regulations within its Shoreline Master Program regarding bulkheads but the County cannot eliminate the exemption entirely because the Shoreline Management Act supercedes the Shoreline Master Program.

Page 28 *"Prohibit or severely restrict the construction of individual new piers, docks, and recreational floats."*

Prohibition of these developments would require a change to the Shoreline Management Act and this recommendation should be addressed to the state. Clear guidelines and recommendations for construction standards of bulkheads are necessary if severe restrictions are to be implemented by local agencies.

Page 28 *"Eliminate the use of pressure treated wood products in marine waters."*

The Washington Department of Fish and Wildlife has adopted BMPs for the types of acceptable treated wood for use in marine environments. The authors should acknowledge that the use of "environmentally safe" products would be appropriate.

SPECIFIC COMMENTS ABOUT JEFFERSON COUNTY WATERSHEDS

Salmon Creek

Page B-11 "In 1992 a supplementation program was started as a strategy to increase the abundance to allow transfer of juveniles to Chimacum Creek without adversely affecting the salmon stock."

This is inaccurate. The original intent of the brood stock program was to increase chum salmon in Salmon Creek. The transfer of chum salmon eggs into Chimacum Creek began several years later.

Snow Creek

We recommend that the Plan address the fact that the historical channel of Snow Creek entered Discovery Bay through Salmon Creek. Any restoration effort on Snow Creek should address the option of restoring the channel to its natural outlet through Salmon Creek (restoring sinuosity, etc) vs. attempting to reconstruct Highway 101.

Chimacum Creek

We are concerned that the factors for decline indicate that flood plain loss is a more significant problem for Chimacum Creek than for the Big Quilcene River. This is not consistent with our understanding of these systems. We would like the authors to re-examine this issue. The Plan indicates that there was no filling at the mouth of Chimacum Creek, however, we are aware of substantial filling in the past at this location. Please examine the impacts of a previous log dump and filling at the mouth of Chimacum Creek.

Big Quilcene

The Plan should include the 1995 Phillip Williams report in the literature review for background on this watershed. In particular, dike removal and mapping of excursion channels should be reviewed.

Dosewallips and Duckabush

Please confirm the land use patterns cited in the Plan for these watersheds because they are not consistent with our analysis in the County's Comprehensive Plan. We would be happy to provide you with our data on the land use in these watersheds.

CONCLUSIONS

Jefferson County appreciates the work of the Point No Point Council Tribes and the state Department of Fish and Wildlife that produced the draft Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recover Plan and, again, wishes to thank the authors for their efforts. We would like to repeat, however, that there is a need for additional clarity and local flexibility setting standards for this effort. We believe that flexible standards within a salmon-focused protective framework can be effective and enforceable.

Thank you for the opportunity to comment on the final draft Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recover Plan. If you have any questions about these comments, please contact Mr. David Christensen at 360.385.9418.

Sincerely,

Dan Harpole, Chairman

Glen Huntingford, Member

Richard Wojt, Member

GARY YANDO, DIRECTOR

DEPARTMENT OF COMMUNITY DEVELOPMENT
PLANNING - SOLID WASTE - UTILITIES
BLDG. I • 411 N. 5TH ST. • P.O. BOX 578
SHELTON, WA 98584 • (360) 427-9670

May 19, 1999

Jay L. Watson, Executive Director
Hood Canal Coordinating Council
295142 Highway 101
PO. Box 5002
Quilcene, Wa. 98376-5002

Dear Mr. Watson:

You will find enclosed some comments as they relate to the Hood Canal/Eastern Strait of Juan DeFuca Summer Chum Habitat Recovery Plan. I have enclosed some prepared by myself and some prepared by Wayne Wright of Applied Environmental Services, Inc. Mr. Wright was retained by Mason County at the request of the Board of County Commissioners. He is a biologist who has been working with Mason County on our Fish and Wildlife draft proposal.

I would also like to point out that my Board of County Commissioners may have some additional comments or information regarding the draft document. They have not had the time to forward any comments they might have because they are back in Washington, DC. If they do I would assume that they will still have a chance when they return.

I want to point out again, as I did at the recent meeting, that this is a difficult program and it continues to be my feeling that there is still a lot of uncertaintity surrounding the program that will come back to haunt each county if we do not take the time to make sure all basis are covered.

If there are any questions, please call me at X270.

Sincerely,

Gary Yando
Director of DCD

cc: Board of County Commissioners

MY COMMENTS ON THE RECOVERY PLAN: GARY

ADDITIONAL COMMENTS RELATED TO THE HOOD CANAL/EASTERN STRAIT OF JUAN DE FUCA SUMMER CHUM HABITAT RECOVERY PLAN

As I understand it the document currently in hand is a starting point with additional documents to follow. However there appears to be a lot of personal assumptions that are not based on science. I offer the following:

Page iii - Hood Canal/SJF summer chum habitat recovery plan was cooperatively developed by the Point No Point Treaty Tribes and Council, Wa. Department of Fish and Wildlife and etc. Now I respect the time and effort put forth by the respective biologists and authors but additional outside input should have been included other than that from agencies and tribal representatives.

Pages iii & iv - Nothing stated regarding fish nets, commercial harvesting or what the tribes are going to do. What it comes down to is private land owners. In my experience in working with our draft fish & wildlife ordinance we are asked these same questions. These issues need to be responded to.

Page 1 - It is stated that their approach utilizes the best available science currently available. This is relatively new ground being broke as far as best available science. What actually is applicable?

Page 3 - There is a lot of emphasis on the impact of human development. There are other influences that need to be covered in greater detail.

Page 6 - It is state that relatively little is known about summer chum habitat use in the near shore environment. This being the case are we not assuming a lot with some of the information? Why is there relatively little information?

Page 10 - Wouldn't the information regarding large woody debris creating habitat relative to basin size be important?

Page 16 - We question the use of the word likely. With the information it says you have based on current available science. Shouldn't we be able to tell a bit more than likely? I may be incorrect but is seems that a state agency proposed a bulkhead study of existing bulkheads and other shoreline structures a few years back and the cost was prohibitive if done in individual county's.

Page 17 - What impacts will be realized by the property owners if existing human barriers are removed?

Page 18 - Restoration will be costly as stated. If state or federal funds are not available it will be next to impossible to provide funding at the local level.

Page 20 - Minimize width of new roads. Please realize the impacts this has on existing local, state and federal regulations and etc. for public road construction. Roads are built to certain

standards because of liability issues.

Page 21 - Prohibit new industrial waste sites & businesses. Their are extensive rules and regulations that are required to be met that control these type of operations. When complied with their is a slim chance of a problem. We do not need new regulations to take care of the issues. What we need is the ability enforce the existing ones and be able to educate the public to what happens if they do not.

A-2 - I have not reviewed earlier investigations but it would appear that there has been very little research on the larger scale of juvenile chum salmon ecology. You may have this planned to do but wouldn't it be beneficial to investigate the issues in greater detail before we move towards impacting private property owners more than they already are? Make sure what we implement is necessary and will work. As in past instances we have a tendency to implement and have to go back and correct problems that arise.

A-3 - Again we state there is little comprehensive documentation so we are making assumptions.

A-7 - The assumption is fish size and timing of summer chum entering North Pacific coastal waters play a large role in determining ocean mortality. Again it appears to be an assumption.

A-8 - Although relatively brief, the time required to adopt appears to vary with fish size, river flow, and the configuration of the estuary?

A-8 - Migration rate maybe generally high although there is not much data that is specially applicable to summer chum fry. An assumption?

A-10 - It is relatively unknown whether neritic prey populations response to the same environmental controlling factors as epibenthic prey populations. An assumption?

A-11 - States that assumptions that summer chum migration behavior is continent upon prey availability, and that eelgrass and other mixed-fine substrate beach habitats are essential sources of preferred summer chum prey organisms, both require further validation specific to summer chum fry. An assumption.

A-11 - Does eel grass patches inhibit the migration and survival of summer chum? It states that it needs to be evaluated and quantified if possible. If possible?

Just another thought for us all to ponder.

As I understand it (you all may already know this) the Kittitas County Commissioners have joined in the lawsuit that challenges the validity of the March 24, 1999 Chinook salmon listing as threatened and endangered under the federal Endangered Species Act. As I understand it they feel that there is a lack of concern for the impacts on local property owners by the state and federal agencies. Now I do not know what the outcome of any of this will be but it is important to recognize that they are not alone in their feelings.

APPLIED
ENVIRONMENTAL
SERVICES, INC.

Tuesday, May 18, 1999

Mason County
Department of Community Development
411 N. 5th St.
P. O. Box 1850
Shelton, WA 98584

Attention: Gary J. Yando

Subject: Review of Hood Canal/Eastern Strait of Juan De Fuca
Summer Chum Habitat Recovery Plan

Dear Gary:

Applied Environmental Services, Inc. (AES) has completed our review of the above referenced document (referred to in this text and The Recovery Plan or Recovery Plan hereafter). We have performed this work at the request of the Mason County Board of County Commissioners. This review includes our assessment of the written text, the methods used in deriving the protection and restoration recommendations, and we also spent some time evaluating the information contained in the appendices and several of the references cited as the basis of their proclaimed "best available science."

Best Available Science

The Recovery Plan offers a cursory discussion about the science and relies on only a few pieces of literature to support their recommendations. One of the primary documents the Recovery Plan targets as best available science is referenced as Pollock and Kennard (1998). AES has reviewed this report. It was prepared to address forest practices in Washington and was funded by The Bullit Foundation, Point No Point Treaty Council and Washington Environmental Council. From our assessment of this report, Pollock and Kennard cite 96 references to make a case for their recommended riparian buffer widths. These authors do a good job of presenting their analysis and pose their references well. However, from the work completed by Mason County in the IRO revision process, we know that the wealth of information regarding stream and riparian buffer widths is well established and that Mason County and all who have participated in the IRO review has had direct access to the information used. The amount of information and topics used by Pollock and Kennard are of interest and useful to review in light of the effort Mason County has had to complete to date.

1550 Woodridge Dr. SE
Port Orchard, WA 98366
(360) 769-8400 fax (360) 769-8700

Again, Pollock and Kennard cite 96 articles in their report. Ten subject topics and the number of articles (by topic) referenced by Pollock and Kennard (1998) are listed below.

Large Woody Debris	18 articles
Water Quality & Temperature	12 articles
Sediment Loading	8 articles
Small Woody Debris / Organics	4 articles
Microclimate	1 article
Beavers	10 articles
Fish Habitat	16 articles
Forestry Practices	12 articles
Riparian Habitats and Buffers	9 articles
Windthrow	4 articles
Miscellaneous	2 articles

It is interesting to note the focus on beaver habitat, and its use to set the riparian zone buffers widths. The Recovery Plan authors were heavily involved with Mason County and during the many meetings, these authors repeatedly referred to the Washington Department of Fish & Wildlife Riparian Habitat Management Plan report written by Knutsen and Naef (1998) as best available science. This reference is not even mentioned in the Recovery Plan. From our review, we do not feel that the best science and the wealth of science on this topic was used in developing the Recovery Plan for Hood Canal Summer Chum salmon.

We have listed our comments in numerical format generally following the document from beginning to end. We hope our review is helpful and assists you with better understanding the information.

1. Beginning with page one, we find that the vast majority of the statements rendered by the authors of this document are not themselves referenced by scientific studies and literature. It seems that the authors have taken the position that much of what they say is given as fact or indirectly support by scientific literature. An example of this occurs in the first paragraph on page one where the authors write:

> "Thus, only by protecting and restoring their habitats will recovery of summer chum be guaranteed."

We find this statement to be inaccurate for several reasons. First, protecting and restoring habitat is not the **only** way we will preserve summer chum salmon in

Hood Canal. According to the Washington State Salmon and Steelhead Stock Inventory (SASSI) report prepared by the Washington State Department of Fish & Wildlife, the habitat in the west Hood Canal has not significantly changed in the past 15 years. If all human activity with respect to land use were to cease, fishing pressure (past, present and future) would most likely still have an effect on the protected populations. Hatchery production activities also play a key role in summer chum salmon population status.

The draft Statewide Strategy to Recover Salmon provided by the Governors Salmon Recovery Office (January 1999) suggests four core elements of recovery, these being Habitat, Harvest, Hatcheries and Hydropower. All of these core elements provide a broad overview of the impacts bestowed upon the salmon in the State of Washington.

The issue of harvest has been debated for some time and is based in the scientific information available to determine the best approaches to determine recovery of the summer chum in Hood Canal. We therefore conclude that the science of the cause of the summer run chum salmon decline is relevant to the recovery process and should be given just weight when preparing land use restrictions or other recovery procedures. According to both the SASSI (WDFW 1992) and NOAA Technical Memorandum - Status Review of Chum Salmon from Washington, Oregon, and California (NMFS) (December 1997) documents, summer chum salmon are not targeted for commercial fisheries. However, the summer chum co-mingles with other targeted species, such as the coho and chinook salmon. This co-mingling is due to run timing overlap with commercially targeted salmon species and makes the summer chum susceptible to incidental harvest.

NMFS reports in the NOAA Technical Memorandum the hatchery and harvest data provided by WDFW and the various Tribes who co-manage the fisheries resource. For example, in 1974, commercial fisheries were opened in Hood Canal and incidental harvest rates on summer chum salmon began to increase rapidly. By the late 1970's, incidental harvest rates on summer chum salmon had increased to 50-80% in most of Hood Canal and exceeded 90% in Area 12A during the 1980's. In 1991, coho salmon fishing in the main part of Hood Canal was closed to protect depressed natural coho salmon runs. Commercial fisheries, targeting hatchery-produced coho salmon, continued in Quilcene Bay. Beginning in 1992, fishing practices in this fishery, including changes in gear, seasons, and fishing locations, were modified to protect summer chum salmon. Since then, the tribal and nontribal harvests of coho salmon during the summer chum migration have been by beach seine with the requirement that summer chum be released or surrendered to USFWS for broodstock.

Exploitation rates on summer chum salmon have been greatly reduced since 1991 as a result of closures of the coho salmon fishery and efforts to reduce the harvest of summer chum salmon. Between 1991 and 1996, harvests removed an average of 2.5% of the summer run chum salmon returning to Hood Canal, compared with an average of 71% in the period from 1980 to 1989. In general, run sizes declined in the 1970's and 1980's as harvest rates increased to relatively high levels. Run sizes rebounded in 1995 and 1996 after harvest was largely stopped. The 1995/96 population rebound shown in the NMFS tables represents the first full year class of returning adults after fishing pressure was stopped. Time will tell if other areas in Hood Canal with depressed populations will rebound.

The NOAA document also suggests: Reductions in harvests alone are insufficient to account for the population rebounds in Dabob Bay and Central Hood Canal, and no populations in south Hood Canal and Southeast Hood Canal have rebounded. This implies that harvest management alone will not contribute a significant level of predictable recovery. We generally concur with this statement by NMFS at this time. The recovery observed in Dabob Bay and Central Hood Canal is reflective of only one life cycle of returning chum salmon since harvest was curtailed. The next several years will provide more information on stock recovery after harvest was stopped.

Hatcheries

Three of the four core elements for salmon recovery are discussed in the 1992 SASSI (WDFW) volume regarding the Hood Canal and Strait of Juan De Fuca. The stock status profile for the Hood Canal summer chum lists habitat, harvest management and hatcheries as the factors affecting production. Possible ecological effects of artificial propagation on the summer chum is discussed in the NOAA Status Review of Chum Salmon from Washington, Oregon and California.

Washington's fishery co-managers have suggested that the extensive use of artificial propagation in Hood Canal may have adversely affected Hood Canal summer-run chum salmon (WDFW et al. 1993:37). The extensive rearing and release programs of chinook, coho and fall chum may cause an increased level of competition and predation on the summer chum (Johnson et al. 1998). The USFWS Western Washington Fishery Resource Office (Cook-Tabor 1994:11) suggest that: "Indirect or direct competition between hatchery produced fall chum and naturally produced summer chum is likely. It is possible the higher densities of small-sized hatchery released juveniles overexploit the zooplankton population, thus limiting the foraging success of juvenile summer chum salmon in Hood Canal." The influence of the artificial propagation programs in the Hood Canal is not fully understood. However, the competitive

natures of hatchery and wild salmon stocks is well know and documented in the scientific literature. Hatchery fish are more aggressive and almost always larger than wild fish. Lack of knowledge pertaining to Hood Canal competition between hatchery and wild stocks should not eliminate the need to investigate the impacts of such programs in developing the management and recovery plan for summer chum. Nor should they be ignored when interpreting the total data available to use in recovery planning.

Hatchery production of fall chum salmon is also heavily discussed by NMFS in their review. To summarize their lengthy assessment, Washington State hatchery practices between 1975 and 1991 released an average of 8.1 million fall chum salmon per year before the end of March, earlier than naturally outmigrating summer chum salmon. A consequence of these earlier timed releases, was a reduction in the outmigration separation between fall and summer runs of chum salmon in Hood Canal. NMFS argues that it is possible that competition for food and rearing habitat could have been altered to the detriment of the summer run chum salmon. WDFW has countered this by suggesting that this large increase in chum outmigrants in Hood Canal would have buffered the summer run chum from predation and further emphasizes that there is a lack of information to confirm positive or negative impacts from hatchery production.

We have provided the above summarized paragraphs on hatchery and harvest, as a balance for comparison to the habitat arguments provided by the Recovery Plan. Although hydropower is present within the Hood Canal ESU, it is not discussed in this response letter since its impacts are more river system specific.

2. The Recovery Plan Organization is discussed on page 2. Within this section, a *Part III. Factors for Recovery* with details on artificial production practices (hatcheries) and harvest management is referenced but could not be located throughout the text.

3. There is an abundance of assumptions and speculation throughout the text that has not been supported by references or direct scientific information. For example, On page 4 the Historic Conditions paragraph gives an excellent example of this speculation. The second sentence of this section states, "Fire and windthrow disturbances episodically supplied large quantities of LWD and sediment to stream channels, but riparian forests and other protected areas may have escaped destruction and served to buffer aquatic habitats against disturbance." In addition, there are several clearly stated assumptions made in the Recovery Plan that draw strong salmonid behavioral traits to specific habitats in Hood Canal. These assumptions are stated on pages 4, 5, and 6

and form a large part of the basis of the methodology for the Limiting Factor Analysis which targets specific habitat types deemed critical for Summer Chum.

There is little room in a recovery plan for speculation. All information that is known at the time of the creation of the document should be included to provide the technical knowledge base necessary to save the specie or species under investigation. Speculation and/or assumptions can lead to short comings within the methods used to form a recovery plan and erroneous conclusions that may impede species recovery.

4. Page 7 paragraph 2 discusses the limited size and great importance of the intertidal delta habitats. The habitat and function that these areas provide, is relatively indisputable. However, another component not mentioned within this paragraph is the intraspecific competition with the outmigration of hatchery chum salmon for these vital and limited intertidal areas, as well as, the interspecific competition with other salmonids.

5. Page 10 paragraph 1 the text discusses the presence of relatively unimpacted basins as a baseline. These basins were not identified for reviewer clarification and/or comparisons with the various stages of degradation between basins. It is unknown if these "unimpacted basins" support Summer Chum and if so, their current status.

6. The discussion of page 16 within the Landscape-nearshore paragraph suggests continued research on nearshore development (i.e. bulkheads, docks, fill) within the intertidal zone and in the associated impacts to the summer chum. Updates pertaining to this topic within the management recommendations in the protection/restoration strategy section, should take place as improved information becomes available.

7. The last paragraph on page 17 is well written and appears to provide an overview of the document. It generally reflects the nature, intent and overall far-reaching effects this plan could render. This paragraph would be more powerful if it were moved to the front of the document and used as the introduction.

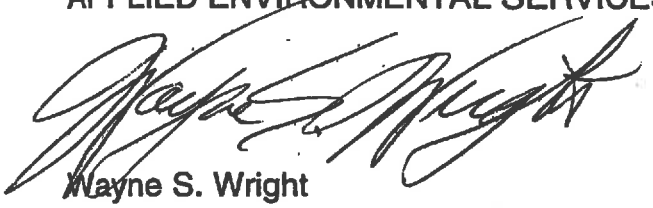
8. Page 20, the Protection Strategies section. How is it proposed that these protection strategies correspond and interface with local and state development regulations? As an example, the restoration options for peak flow on page 20 are good ideas but may be unobtainable both physically and economically. Who will be economically and/or physically responsible for the restoration and/or the compensation for the impacts of the removal of existing flood control structures?

10. The protection strategies for riparian forests derive a 250 foot buffer from Pollock and Kennard (1998). When writing a document of this magnitude, that may have an immense impact to many people and acres of land, numerous sources should be reviewed to provide the "Best Available Science" that develop appropriate treatments to the demonstrated causes of a species decline. With respect to riparian habitat, it appears that only Pollock and Kennard have been reviewed or the authors have used Pollock and Kennard's review as the basis for their conclusion. Again, there is an enormous data base available regarding this topic.

In summary, the *Hood Canal/Eastern Strait of Juan De Fuca Summer Chum Habitat Recovery Plan* (1999) does spend a significant amount of effort on habitat issues. No one is disputing the critical nature of habitat protection recovery. We realize that the scope of the habitat recovery plan only covers habitat issues and management recommendations. However, it is important to not loose sight that there are other significant pieces to the summer chum recovery puzzle. The most prudent approach to the recovery of the summer chum salmon, is the development and presentation of a total recovery plan that includes habitat, artificial propagation and harvest issues and management recommendations. Nothing can guarantee the recovery of the summer chum salmon. However, if we are to succeed, a more holistic recovery plan that presents implementable, realistic and consistent monitoring is desperately needed at this time.

Sincerely,

APPLIED ENVIRONMENTAL SERVICES, INC.



Wayne S. Wright
Sr. Environmental Scientist, PWS
Vice President

attachments

BIBLIOGRAPHY

Applied Environmental Services. November, 1998. Mason County Interim Resource Ordinance Fish and Wildlife Habitat Technical Memorandum. Port Orchard, Washington. 38 p.

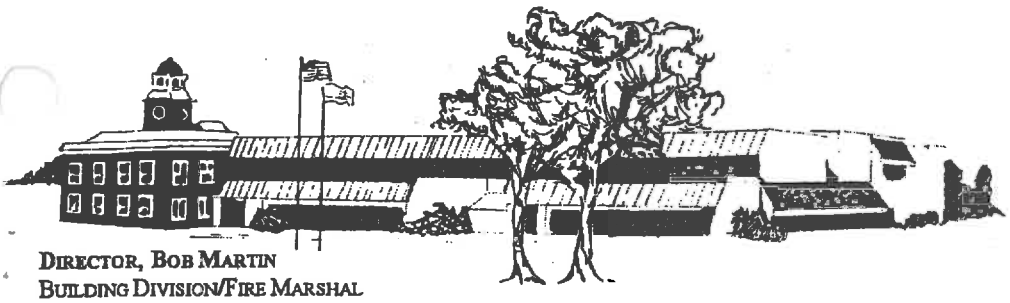
Johnson, O.W., W.S. Grant, R.G. Cope, K. Neely, F.W. Waknitz, and R.S. Waples. December, 1997. Status review of chum salmon from Washington, Oregon, and California. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-32,280 p.

Pollock, M.M., P.M. Kennard. December, 1998. A low-risk strategy for preserving riparian buffers needed to protect and restore salmonid habitat in forested watersheds of Washington state. 10,000 Years Institute. Bainbridge Island, Washington. 31 p.

The Joint Natural Resources Council and The Governor's Salmon Recovery Office. January, 1999. Draft Statewide Strategy to Recover Salmon: Extinction is not an Option. The Governor's Salmon Recovery Office. Olympia, Washington. 97 p.

Washington State Department of Fish and Wildlife. December, 1994. 1992 Washington State Salmon and Steelhead Stock Inventory: Hood Canal & Strait of Juan De Fuca Volume. Olympia, Washington. 419 p.

CLALLAM COUNTY
DEPARTMENT OF
COMMUNITY DEVELOPMENT



DIRECTOR, BOB MARTIN
BUILDING DIVISION/FIRE MARSHAL
ENVIRONMENTAL HEALTH DIVISION
PLANNING DIVISION/WATER QUALITY

CLALLAM COUNTY COURTHOUSE
223 E. FOURTH ST., P.O. BOX 863
PORT ANGELES, WA 98362-0149
(360) 417-2000, FAX (360) 417-2443

May 25, 1999

Hood Canal Coordinating Council
PO Box 5002
Quilcene, WA 98736-5002

RE: Hood Canal/Eastern Strait of Juan de Fuca Summer Chum Habitat Recovery Plan

Dear Ladies and Gentlemen:

The Clallam County Department of Community Development has reviewed the above Plan in its Final Draft form and have the following comments:

In general, the recommendations in the document apply to Jimmycomelately Creek, the Dungeness River, and the marine shorelines of Sequim Bay and Eastern Clallam County as habitat for the Summer Chum. For both Jimmycomelately Creek and the Dungeness River, the majority of the habitat for this species has been severely degraded and altered. In both cases, protection of habitat in its current condition will not result in recovery of the species. Successful recovery of the Summer Chum population and habitat will require restoration of that habitat at a multiple reach/estuary scale. Clallam County is currently in the planning stages for large-scale projects on both those water bodies. In addition, we are in the process of completion or construction of habitat restoration projects within the range of the Summer Chum. Given habitat conditions that pose more of a threat to the continued existence of the stock than a benefit, it is counterproductive to place a great deal of emphasis on habitat protection through land-use regulation (i.e. large riparian buffer zones and more stringent regulations regarding activities in those reaches) until such time as those reaches are restored, and may interfere with the restoration process itself. In those areas where habitat is not severely degraded, such as above River Mile 2.7 on the Dungeness River, habitat protection is appropriate and supported by the Department of Community Development. In general, given the types of impacts across the ESU, functional restoration of estuaries should be a key component of the habitat recovery strategy. Properly restored estuaries should have positive effects on such factors as low flow, peak flow, temperature, channel complexity, sediment, riparian forests, fish access, and nearshore habitat. Restoration of the degraded estuaries should be the focus of restoration activities.

It is also apparent in this plan as well as the factors for decline as described in the ESA listings of both the Summer Chum and Puget Sound Chinook that protection and restoration of the nearshore marine environment and natural shoreline processes is essential to the recovery of the species. The state of knowledge regarding management requirements for protection and restoration of nearshore processes as well as the current condition of nearshore habitat is still in its infancy. Development and implementation effective policies for management of the nearshore environment will be a significant challenge to all of the local governments in the region. To quote the executive summary of the plan "This suggests that estuarine habitat recovery planning and implementation must be coordinated regionally." The Department of Community Development concurs. We are interested in exploring options and working with you to develop an effective regional strategy.

The Department has been supplied with the Jefferson County Commissioner's comments on the plan, and agrees substantially with those comments and will not repeat them.

Additional Comments:

Page 20 - Peak Flows

The 5% impervious surface threshold appears to lack required specificity. In some locations, these thresholds could be exceeded if all stormwater is infiltrated. In other locations, an emphasis on maintenance of complexity of the drainage network (possibly through regional stormwater planning) will be more effective, especially in those areas which are already developed. Special emphasis should be placed on retention of native vegetation in and adjacent to the Rain-on-Snow Zone, which is approximately 1200 ft. in elevation in Clallam County.

Page 22 - Nutrients

Additional measures would be to install de-nitrification systems on new and existing septic systems. For some areas, low or no phosphate detergents could be required to reduce harmful algal blooms. This item seems particularly appropriate for an educational focus for all landowners in a given watershed. The restoration of buffers and wetlands should also have a beneficial effect on nutrient loading to surface waters in those times of year (May-September) when the effects of excess nutrient inputs are greatest.

Page 23 - Channel Complexity - #3 Channel Simplification

To be effective the last sentence should read "Existing laws regarding these activities should be changed to require study of alternatives to bulkheading, alternative designs for bulkheads, and mitigation for the effects of bank protection on marine and freshwater shorelines." The existing shoreline exemption for bulkheads is a portion of the State Shoreline Management Act. While changing the Act would require participation of the Legislature, local governments can promulgate local regulations, such as Critical Areas Ordinances or local Shoreline Master Programs, which exceed the minimums required by State Law. Amendment of these programs is something that local governments within the Summer Chum ESU can accomplish independently of the State.

Page 27 - Nearshore Habitat - See comments above.

#3 - "Eliminate the use of pressure treated wood products in marine waters". This should read "Eliminate the use of biocide-treated wood products where the biocide can migrate to or contaminate adjacent (i.e. immediately adjacent) marine habitat."

THank You for the opportunity to comment on this document. Clallam County looks forward to increaing cooperation with other local governments, tribes and other entities within the Summer Chum ESU. If you have any questions regarding the above information, please contact the Planning Division by phoning (360) 417-2423 or by stopping by the County Courthouse.

Sincerely,

Joel Freudenthal
Habitat Specialist

c. correspondence file
project file Summer Chum Recovery Plan

Subject: **Summer chum Recovery Plan**
Date: Tue, 1 Jun 1999 13:26:15 -0700 (PDT)
From: "B. Nightingale" <nightsie@u.washington.edu>
To: jwatson@sprintmail.com

Jay,

Thank you for the copy of the Summer chum Recovery Plan. The report is a very well written and synthesizes a lot of very valuable information. However, as a member of Wild Olympic Salmon and the Jefferson Land Trust, I would like to point out that the section entitled "Subestuary habitat loss and degradation" that rates impact as "none" or "low" in the chimacum creek narrative likely does not include observation of an impact of log storage on the subestuary habitat. Log storage has appeared to have had an adverse impact on eelgrass bed habitat on the south side of the creek mouth.

In 1995, Dave Shreffler with Battelle found that the substrate on the south side of the creek mouth in PT Bay was covered with wood chips and bark left from log rafting. On this side of the creekmouth, the eelgrass beds are sparse and patchy - probably related to the impacts of log rafting.This may have been overlooked in information getting across to the report writers as the area south of the creek mouth was not

integral to an eelgrass transplant project on the north side. However, this is likely to be an integral piece of information for future plans associated with that shoreline and may be important habitat to chum coming out of the Hood Canal as well as Chimacum Creek.

Thanks again for the nice work.
Barb

>>>
Barbara Nightingale
University of Washington
School of Marine Affairs.
Masters Candidate
URL http://weber.u.washington.edu/~nightsie
e-mail: nightsie@u.washington.edu
phone: (360) 379-3666
Research Project: Impacts of Ferry Terminals on Migrating Juvenile Salmon
UW Fisheries Research Institute-Battelle Marine Science Laboratories
Washington State Department of Transportation-US Army Corps of Engineers
>>

CITY OF BREMERTON

LYNN S. HORTON, Mayor

239 4th Street • Bremerton, Washington 98337 • (360) 478-5266 • FAX (360) 478-5883

June 11, 1999

Jay Watson
Hood Canal Coordinating Council
P.O. Box 5002
Quilcene, WA 98376

RE: COMMENTS ON THE DRAFT SUMMER CHUM HABITAT RECOVERY PLAN

Dear Mr. Watson:

Thank you for the opportunity to comment on the *Hood Canal Summer Chum Habitat Recovery Plan.* The City's main interest in this plan concerns the Union River. The City owns and manages the headwaters of the Union River watershed for public water supply and forestry. As one of the few approved unfiltered surface drinking water supplies in the country, Bremerton carefully protects and monitors this watershed . The Union River summer chum salmon stock has experienced increases over the last 15 years and was the only stock rated as "healthy."

The following comments are the City's response to the draft summer chum plan:

- Page B-38 Hamma Hamma River Description: Please note that Bremerton does not have any water rights in this system. Applications filed by the City in the 1950's were recently denied by the Department of Ecology.

- Page B-54 Union River Description: It should be emphasized that the City's Casad Dam is located above McKenna Falls which provides a natural barrier to fish migration. The dam is approximately 0.75 miles upstream from the falls.

- Page B-56 Flows: A comment in the document concerning low flow states that diversion may reduce available water for migration. However, the City provides consistent downstream flow from dam storage as required by perfected water rights and has documented where downstream flows to the Union River in the summer can exceed watershed production. For instance, during most days in August 1998, the City provided more water downstream than would otherwise be available during this dry month. Not mentioned in the plan is that high flows are attenuated by the presence of the dam. Flows are monitored with weirs measuring downstream flows from the Main Stem, West Branch, and East Branch of the Union River. This data is available.

- Page B-56 Water Quality: Protection of the upper basin Union River watershed in the City of Bremerton's ownership also maintains habitat and exceptional water quality sent downstream. Water quality monitoring data is available.

- Page B-57 Item 3: It appears that most of the concern for the Union River summer chum run is primarily habitat degradation in the lower basin. The City can provide information showing the positive impact in the upper basin provided by the presence of the water supply system and use of best management practices for operation and maintenance.

If you would like more information about the City's comments, please contact Kathleen Cahall, Water Resources Manager (360-478-2315) or Bill McKinney, Forestry Manager (360-478-5354).

Sincerely,

Lynn Horton
Mayor