



❖ Appendices

Appendix A: Jamestown S’Klallam Tribe Full Comments

Jamestown S’Klallam Tribe Responses to HSRG Report

My comments are provided with the two stated goals of hatchery reform in mind:

- Help recover and conserve naturally spawning populations
- Support sustainable fisheries

Comments offered here are limited to the recommendations provided for Dungeness Chinook, Dungeness Hatchery Coho, Dungeness Fall Pink and Dungeness Hatchery Winter Steelhead.

I would like to emphasize that many of the recommendations listed by the HSRG are those that the co-managers have been discussing for years. There are also new and interesting recommendations from the HSRG that we are anxious to attempt and implement. However, resources necessary to accomplish these recommendations are scarce. We welcome the support of and partnership with the HSRG in our attempts to reform the hatchery programs in the Eastern Straits region.

Dungeness Chinook

The HSRG recommends that studies be initiated to understand the freshwater life history patterns of resident chinook. By resident we assume the HSRG means the natural, locally adapted chinook population of the Dungeness River. Studies such as these were initiated in 1997 and our understanding of freshwater life history has improved. Much more work is needed. Downstream migration of chinook through the lower river must be sampled on a regular basis beginning as early as April and extending into the fall months. This can be accomplished by a passive sampling apparatus such as a rotary trap or by active sampling means such as seining. The river reach under tidal influence and the Bay must also be regularly sampled. A



long-term commitment both in terms of effort and funding is required for this study.

Hatchery release strategies must be evaluated through analysis of coded wire tag data as it becomes available. July and August releases of zero age chinook do not seem to contribute well to adult returns. With increasing returns to the river in 2001, it may be somewhat premature to discount a given release strategy until available coded wire tag data has been analyzed.

Yearling chinook releases will be evaluated with coded wire tagging studies beginning this year. Early indications are that this rearing strategy will significantly increase the release to return rates of Dungeness chinook.

A recovery plan that moves managers beyond the captive broodstock program is needed. Efforts to develop this plan will begin this year.

Plans to develop well water sources for Dungeness Hatchery are underway. Should adequate quantities of ground water be found, incubation and early rearing conditions at Dungeness Hatchery can be greatly improved.

Related to the acquisition of adequate well water is Canyon Creek, the existing secondary water supply for Dungeness Hatchery. Should the Department of Fish and Wildlife find adequate water and funding to utilize ground water as an alternative to Canyon Creek, restoration efforts should immediately begin. The water intake dam should be removed in a manner that maximizes restoration opportunity both upstream and downstream of the structure. Stream channel and riparian restoration projects should be planned, funded and accomplished as soon as practical. A restored Canyon Creek represents a major tributary habitat in the Dungeness River system, particularly for natural production of coho, steelhead and cutthroat.

Opening the Dungeness River side channel across from the Hatchery poses some major questions from a river hydrology and channel stability point of view. This issue needs the attention of experts in the field before pursuing a main river channel alteration.

Dungeness Hatchery Coho

Dungeness Bay and the Dungeness River have been home to Indian salmon fisheries for thousands of years. S'Klallam village sites have historically been located on the shore of the Bay because of the rich diversity of fish and



shellfish resources. The Dungeness Bay hatchery coho fishery is the last remaining commercial salmon fishery with Jamestown S'Klallam Tribal member participation. One of two goals for the hatchery reform effort is to find ways of supporting sustainable fisheries. This fishery is of great importance to the Jamestown S'Klallam Tribe and deserves the support of the HSRG.

Little is known about the status of natural coho in the Dungeness River system. While the life history of coho in general and of the regional populations in particular is fairly well understood, the Dungeness River system has been so greatly altered that the population's response to the lack of quality spawning habitat, limited summer rearing area and treacherous over-wintering conditions is not understood. A straightforward estimate of coho production from the Dungeness is needed along with an accurate estimate of the annual spawning population size. This can be accomplished through spawning surveys and with smolt tagging or marking and some of the same lower river sampling projects needed for studies of juvenile chinook migration.

Concerns about the effect of large number of hatchery coho smolts being released into the system are valid. The life history studies needed for chinook can be adapted to monitor the migration of hatchery coho through the lower river, to ensure the rapid migration that is intended is occurring. More importantly, managers need to learn what the hatchery coho do when they reach the estuary. Seining operations can be an effective means of monitoring fish communities in the near-shore environment of Dungeness Bay.

Evaluating whether the hatchery coho program could become an integrated program depends heavily on managers understanding more about the natural population, what the population size is, how productive the stock is, what the limits to production are in the basin, and whether adequate broodstock could be obtained on an annual basis.

Efforts to assess the spawning activity of coho salmon in the basin, where they spawn, what the origin of spawners is, whether hatchery coho spawners disturb chinook and/or pink salmon redds and displace natural coho spawners, have begun. This is particularly true in years of high marine survival when coho returns number in the tens of thousands and a significant portion of the hatchery run bypasses the Hatchery and spawns in the wild.



Dungeness Fall Pink

Assessing risks of producing fall pink salmon in the hatchery is appropriate. However, an assessment will undoubtedly show the habitat these fish utilize for spawning is highly unstable. Given the preferences for spawning habitat these fish exhibit there is little opportunity for production improvement or perhaps continued existence of the stock without some degree of intervention and the use of salmon culture technology. Perhaps this is where the assessment effort would be most valuable.

In 2001, analytical tools used in the genetic separation of summer and fall pink salmon broodstock improved measurably. Different marking and tagging methods of cultured fish are being considered for possible use with Dungeness fall pinks. The co-managers are continually seeking improvements with these and other methods and techniques.

Dungeness Hatchery Winter Steelhead

Wild steelhead management zones may be attempted in this and other regions. The size of the region and the quantity of hatchery fish released should be evaluated carefully given the propensity of hatchery origin steelhead to stray. Also, management jurisdictions must be given consideration with this approach. One of the goals of the reform effort is to support sustainable fisheries. Some Tribes, whose local river system may become designated as a wild production system, may lose a sustainable winter fishery and may not have fishing access to those rivers where hatchery production would more often provide that sustained fishery.

A prescribed release time and size may or not be appropriate for some hatchery steelhead stocks. Perhaps an analysis of available size and time of release data would be in order. Regional differences may exist in what is thought to be optimal release or migration timing.

Much more than removing the dam, a restored Canyon Creek likely represents some of the best tributary spawning habitat in the basin for coho, steelhead and cutthroat.

As with coho and chinook, were Dungeness Hatchery able to use ground water of sufficient quantity and quality in place of the existing surface water



from Canyon Creek, all aspects of egg incubation and initial rearing would become much more manageable.



Appendix B: Nisqually Tribe Full Comments

MEMORANDUM

TO: HSRG Members

FROM: David A. Troutt, Natural Resources Director

DATE: January 16, 2002

RE: Comment on the Final Report of the HSRG

I have carefully reviewed the draft Final Report of the Puget Sound and Coastal Washington Hatchery Reform Project and would like to provide both general and specific comments. These comments are intended to be constructive and maintain the separation, and therefore integrity, of the independent scientific review and closely related policy decisions needed to implement the suggested changes.

I would like to compliment the HSRG for the excellent product represented in this draft report. From organization to detailing specific recommendations, this report is well thought out and should find use amongst a number of audiences. Considering the technical nature of the subject, you have done an excellent job in presenting the information in a way that will find broad acceptance and appeal. Given the importance of this project and the focus hatcheries have been subject to over the recent past, it is only through an open, honest, and scientifically credible review of our current practices will we make significant progress toward recovery in these dynamic ecosystems; and, equally important, acceptance in the turbulent court of public opinion.

One of our goals in this report should be to avoid crossing that somewhat gray area between science and policy that has led to the criticism of efforts like this in the past (i.e. NMFS and its Salmon Recovery Science Review Panel). I have reviewed this document with this intent in mind, but you should also consider this objective in your final deliberations over this report. Nothing will spell the end of a scientific endeavor faster than a trespass into policy.

On to specific comments:

Page 6, Egg-Take Timing. The HSRG should recommend consideration of removing policy constraints to promote the desired outcome.

Chambers Bay Fall chinook section – We concur with the recommendations

Garrison chum – we concur with the analysis and further recommend discontinuing the program.



The level of priority given to pink protection in the Nisqually should be complimented by actions taken outside of the basin. Mention should be given to protection strategies throughout their life cycle. Finally, the determination of a high priority is clearly a policy call. We need this report to reflect the risk of our current strategy and call for a change, not determine the ranking of this concern versus other concerns.

Recommendations on McAllister – Whether we agree or not with this notion, how the property is dealt with and where the potential proceeds are spent is clearly a policy decision and should be removed from this document.

I hope that these suggestions are found useful and productive as we move on to the next phase in this project. Thanks again for your hard work and commitment to this project and to the improved management and recovery of salmon in this region.



Appendix C: Squaxin Island Tribe Full Comments

Squaxin Island Tribe
Comments on HSRG Recommendations for South Puget Sound Region
January 7, 2002

Deschutes River Hatchery Fall Chinook

Recommendation 1: Obtain a Memorandum of Understanding (MOU) from NMFS addressing potential Endangered Species Act status of Chinook spawning naturally above Tumwater Falls, prior to implementing the long-term plans described below.

The Tribe is strongly supportive of this recommendation. We have continually raised this issue with the State, and together we have approached NMFS in the past to address this issue. To date we have not been successful in getting NMFS to establish a formal position on the issue. Hopefully with this recommendation we can renew our efforts.

Recommendation 2: Develop long-term plans for rearing and release facilities that eliminate the need for out-of-basin transfers. This requires investment in new facilities in the Deschutes River basin.

The Tribe is supportive of this recommendation. We are working closely with the State and their consultant to develop a programmatic approach and Master Plan proposal for facilities that would provide for all life history stage rearing within the basin.

Recommendation 3: Implement a transitional, in-region program that restricts fish and egg transfers, to be consistent with the co-managers disease policy. Consider incubation at Minter Creek and rearing at Coulter Creek as part of this transitional program.

The Tribe is supportive of this goal while recognizing that there are short-term obstacles to overcome. While there is certainly opportunity in reprogramming the Coulter Creek facility for this purpose now that on-station release of Chinook has been discontinued there, it is unlikely that this change alone can accommodate the full range of production. We are committed to investigating a full range of interim alternatives while moving expeditiously toward implementation of a new, in-basin facility.

Recommendation 4: Develop rearing and release locations that eliminate all net pen operations in Percival Cove.

The Tribe is supportive of this recommendation and has advocated such in the Capital Lake Adaptive Management Steering Committee.



Recommendation 5: Provide adequate water and pond space to allow fish to grow and be released at the optimal time and size for maximum survival advantage.

With the development of the new facility plan for the Deschutes, the Tribe has the expectation that it will accommodate optimal production strategies for the Chinook program.

Recommendation 6: Develop appropriate pollution abatement or rearing strategies to meet local, state and federal clean water requirements.

It is the Tribe's expectation that the new facility will be state-of-the art in terms of treating and reusing available water resources. It will be our goal to exceed all relevant water quality standards and statutes.

Recommendation 7: Develop a strong educational component involving local partnerships, given the location of the drainage within a major urban area, the state Capitol and the City of Tumwater.

The Tribe is working closely with the State, the City of Tumwater, Trout Unlimited, and other local partners to achieve a positive climate for supporting the development of a new facility that maximizes the opportunity for public education.

Squaxin / South Sound Net Pens Hatchery Coho

Recommendation 1: Quantify the amount of straying from South Sound Net Pens to South Sound Coho tributaries.

The Tribe is involved with several efforts that are aimed, at least in part, at further clarification of Net Pen Coho contribution to naturally spawning coho production. We have conducted adult trapping programs on three local coho tributaries and are continuing this effort on one of these where an adult trap is practical to maintain without flooding over a complete spawning season. All fish are marked and increasing numbers will be coded wire tagged such that spawning assessments will be better able to detect hatchery fish presence on the spawning grounds. The Tribal fishery is being intensively sampled including scale analysis to ascertain the hatchery and wild composition of the commercial catch. Consistent efforts at these types of studies will be necessary to achieve a dependable level of quantification.

Recommendation 2: Compare the genetic and life history characteristics among South Sound, Skykomish and Minter Creek coho populations.

A better understanding of any existing distinctions between these coho stocks is warranted. Due to decades of out planting using Minter Creek fish, it is unclear if there exists any distinct South Sound stock that is different from Minter Creek. Coho are notoriously hard to determine distinct genetic characteristics between stocks. Still, life history attributes deserve more detailed attention and should also include performance characteristics regarding the production setting,



especially considering the concerns expressed by the HSRG about survival rates. There also exists CWT data from different stocks utilized in the past, which can be analyzed to further evaluate contribution to the programs intended goals.

Recommendation 3: Compare rates of straying between in-region and out-of-region incubation and rearing.

Examination of these rearing strategies is currently underway. Fish reared at Minter Creek and transferred directly to the net pens will be compared with similar fish reared at Wallace and transferred directly to the pens. Additionally, we will be examining groups of different brood origin (Minter Creek and Skykomish) that are reared under identical strategies and conditions.

Recommendation 4: During these evaluations, relocate incubation and rearing within the region, to the extent that space exists at regional facilities.

The Squaxin Island Tribe remains concerned about the effect of this recommendation. We have strong reservations that this proposal does not fully consider the intent of the program. While we support the intent to minimize fish transfers, and the effects from straying, we believe it is premature to follow this recommendation without further examination of its outcomes. Our contention that out of basin rearing actually helps to reduce straying should be considered in light of additional information. Even so, it may be possible to reduce transfers and the basins impacted by improving infrastructure at a central location. It is our position that this recommendation would clearly benefit from additional discussion. We will certainly pursue this discussion within the co-manager Core Group proposed below, and would also like to suggest that the HSRG reserve some time to revisit this issue in the future when there is better information available upon which to base a recommendation.

Recommendation 5: Evaluate benefits and risks of using Skykomish stock versus a within-region stock, probably Minter Creek hatchery.

The Tribe and the State are currently undertaking this evaluation with a direct comparison of performance of these two stocks in the production setting. Brood from both facilities will be reared simultaneously at the same facilities throughout their rearing history and will be evaluated by means of CWTs recovered from adults in the fishery, at the hatcheries, and recovered on the spawning grounds. In addition, the management issues implicit in the broodstock discussion will be evaluated in a workgroup proposed as an extension of the Comprehensive Coho process. This Core Group will allow the co-managers to fully discuss all the management implications including in addition to the enhancement issues presented in the HSRG report, harvest management issues relating to terminal and pre-terminal fisheries, habitat protection, supplementation and restoration efforts incumbent in projects like the Goldsborough Creek dam removal, and ecosystem loading concerns (also identified by the HSRG).

Recommendation 6: During these evaluations, change the broodstock source for this program to a local broodstock.



The co-managers are already in partial compliance with this recommendation as the 2001 brood will be approximately one half Minter Creek broodstock. In order to maintain the validity of the comparison between broods, this regime will be maintained for a minimum of three years. There is also a risk in shifting to the Minter Creek stock too abruptly, that there may not be sufficient brood stock available to supply the additional egg take needs. Minter Creek is within an area that is managed for hatchery production; therefore the harvest level is higher than the Skykomish system, which is managed for natural production. The management regime at Skykomish assures a surplus of hatchery fish available at broodstock, while Minter Creek can be influenced by the harvest regime. Two years ago Minter Creek barely had enough escapement to supply its on-station needs, even with additional fishery restrictions implemented. This is a consideration that must be built into management plans to assure there are enough adults returning to Minter Creek to supply the enhancement goals.

Recommendation 7: Develop a long-term strategy based on the results of the analyses described above and other relevant information.

As noted above, the regional co-managers will convene a workgroup under the auspices of Comprehensive Coho to further elucidate the management issues for southern Puget Sound coho and develop a comprehensive approach for harvest, habitat and hatchery issues. This Core Group will work in an integrated fashion to address regional issues and will include the best-informed and most involved scientists in developing the management strategy.

Recommendation 8: Do not increase the size of the program beyond the current level of 1.8 million fish, at least during the period when survival is depressed for many stocks possessing a yearling life history strategy.

It is the intention of the co-managers to maintain the current reduced production level until we can develop a better evaluation of the survival depression observed in recent years. To that end, we are participating in the development of a trophic level model (ECOPATH) of southern Puget Sound in an attempt to determine whether any regime shifts have altered productivity of this region. We are currently pursuing funding to assess the residency period and survival of coho smolts in South Sound once they are released from the net pens. This information will also be useful in calibration of the trophic production model.



Appendix D: Stillaguamish Tribe Full Comments

Suggested Changes, Recommendations and Responses to the Draft HSRG Regional Review

Stillaguamish North Fork Summer Chinook Manager's Response

Recent fish health information has documented elevated pre-spawning mortalities in male chinook broodstock as being caused by BKD. Beginning in 2002, all adult broodstock will be inoculated to help reduce prespawning mortalities.

During 2002 grant proposals will be submitted to both the BIA (cyclical maintenance and rehab) and NWIFC (hatchery reform) to make significant improvements to the existing spawning shed location and disease transmission risks.

Funding has been secured through the HSRG hatchery reform grant process to expand early rearing capacity at the Stillaguamish Tribe's Harvey Creek hatchery. Additional early rearing capacity should be on line by the fall of 2002.

The co-managers are working diligently towards acquiring additional first pass water and improved plumbing for summer chinook reared at the WDFW Whitehorse hatchery with the goal of having additional water available by the spring of 2003.

The rearing ponds at both hatcheries have had recent upgrades to their predator control equipment. The WDFW Whitehorse rearing pond will have an electronic counter installed to accurately enumerate releases and losses of summer chinook as the fish leave the pond. Should predator losses continue to be significant, additional measures will be taken to further reduce predator access to the acclimation pond.

The Stillaguamish Technical Advisory Group and Stillaguamish Implementation and Review Group are developing specific habitat improvement objectives and habitat restoration projects needed to recover natural chinook productivity throughout the Stillaguamish watershed.

The Stillaguamish Tribe and WDFW are implementing monitoring and evaluation programs that include coded wire tagging, morphometric analysis, smolt trap outmigration characterizations, extensive spawning ground surveys and genetic analysis.



North Fork Stillaguamish Chum Managers Response

The Tribes and WDFW have agreed with the HSRG panel that the North Fork Stillaguamish chum program as outlined in October is not meeting its goals as an integrated harvest program. Our proposal is to change the goal of the program to an integrated education program. During the time that chum salmon are returning to the Stillaguamish Tribe's Harvey Creek hatchery, we have 600 to 1000 students from local school districts coming to the facility to observe both hatchery spawning and natural chum spawning that occurs in the stream adjacent to the hatchery. During their visit to the facility they also learn about the habitat and water quality requirements for healthy salmon populations and how humans have impacted salmon habitat.

The proposed integrated education program would involve downsizing the current integrated harvest program from 650,000 to a release of 200,000 chum fry at 400-600 fish per pound. This release would result in an annual return of 200 to 300 adults back to the hatchery. We would augment these returning hatchery fish each year with 10-20% wild chum exclusively from the North Fork Stillaguamish.

With the addition of a doubling of our current early rearing capacity scheduled to be in place by the fall of 2002, we can operate this chum program with no direct impacts to the chinook program and meet our target rearing densities of .25 pounds/cubic ft/inch for all species reared at this facility.

Using other species of salmon returning and rearing at the facility is not feasible for the following reasons. When we are spawning chinook in August and early September, students either have not returned from summer vacation or have just started school. Most of the classes that come for tours in late November and early December are studying about salmon as part of their class work and the field trips compliment that learning. Both our current coho program and the proposed modifications to that program don't provide enough fish for spawning for all the classes and coho rarely spawn in the stream adjacent to the hatchery, but instead move up higher in the watershed.

In addition to educational component to the program, the hatchery chum program provides a stable source of carcasses for the Sarvey Wildlife Care Center for use in the rehabilitation of injured wild animals. The hatchery chum program also makes eggs and carcasses available for tribal members who no longer fish and want fish for eating and smoking.

During 2002 grant proposals will be submitted to both the BIA (cyclical maintenance and rehab) and NWIFC (hatchery reform) to make significant improvements to the existing spawning shed location and disease transmission risks.

Funding has been secured through the HSRG hatchery reform grant process to expand early rearing capacity at the Stillaguamish Tribe's Harvey Creek hatchery. Additional early rearing capacity should be on line by the fall of 2002.



The co-managers will again evaluate the appropriateness of using Stillaguamish chum for the Maxwellton Supplementation program and discontinue the program if the stock is not appropriate.

South Fork Stillaguamish Chum Managers Response

This program is operated at the corrections facility in conjunction with educational staff at the facility. The individuals at this facility are used for stream restoration and fire control activities. Having them actively involved in the care and release of salmon helps them understand the connection between what they learn in their classes and the work that they carry out in the field.

The proposed changes for the program are that we will return to broodstocking 100% of the chum needed for the program from Jim and Siberia creeks, which run immediately adjacent to the Indian Ridge facility and are tributaries of the South Fork Stillaguamish. The eggs will be incubated at the Harvey Creek hatchery and then returned to the facility egg box for hatching and release.

During 2002 grant proposals will be submitted to both the BIA (cyclical maintenance and rehab) and NWIFC (hatchery reform) to make significant improvements to the existing spawning shed location and disease transmission risks.

Funding has been secured through the HSRG hatchery reform grant process to expand early rearing capacity at the Stillaguamish Tribe's Harvey Creek hatchery. Additional early rearing capacity should be on line by the fall of 2002.

Stillaguamish Coho Managers Response

The HSRG panel noted that one of the reasons they recommended putting this program into standby was because the run was healthy. Yet in the matrix, the stock status was noted as at risk. The SASSI status for this stock is depressed.

George Pess and others have noted significant losses of coho habitat. Off channel habitat has been critically diminished. Beaver ponds, sloughs and tidelands account for the majority of habitat lost in the last century. Between 67% to 91% of these habitats have been eliminated due to human land use altercations (Pess et al., 1999). Approximately 37% of summer and 21% of winter coho loss in tributaries is due to blocking culverts (Pess et al., 1999).

From 1992 to 2001, Stillaguamish tribal fishermen have only been able to have directed coho fisheries 3 out of 10 years and escapement levels have been met only 4 out 12 years during the 1988 –99 period (Drotts, per.comm.). Wild Stillaguamish coho have been and continue to be one of the key weak stock drivers limiting mixed stock coho fisheries throughout the Pacific Northwest region.



The HSRG scientific panel had a number of alternatives and recommendations concerning the current coho program. The tribe has reviewed those alternatives. The proposal is to modify the existing integrated recovery program to an integrated harvest/recovery program, where each year we capture 100% of our broodstock from the Fortson Creek fish ladder, which is a tributary of the North Fork Stillaguamish. This tributary has a consistently strong run of coho that occurs in the middle of the time period that coho are returning and spawning in the North Fork Stillaguamish.

Up to 45 pairs of coho would be captured each year, spawned using a 5 X 5 matrix cross and early reared at the Harvey Creek hatchery. Additional rearing would occur at the tribe's North Fork (Johnson Creek) hatchery (9,600 cu/ft.; 300GPM). These fish (50K) would be coded wire tagged for four consecutive years to evaluate the existing North Sound multi-generational hatchery indicator stock programs and how well they represent naturally spawning North Fork Stillaguamish coho.

The fish would then be transferred in April to a net pen located in Warm Springs Slough for final acclimation and release during mid-May. The Warm Springs Slough is an isolated slough located in Port Susan ¾ mile south of the mouth of Stillaguamish River, which receives freshwater drainage from agricultural fields. The water is pumped year round over the sea dike into the head of the slough.

Adult CWT tagged wild origin program coho would return primarily to the Warm Beach Slough with any strays returning to either the North Fork (Johnson Creek) hatchery or Fortson Creek. Returning tagged fish could be culled out of traps situated at both locations. In addition, both Fortson Creek and Johnson Creek would be surveyed to enumerate straying levels from the net pen. The returning hatchery adults would be available to tribal members and sports fishermen in an extreme terminal fishery at Warm Beach Slough with restricted fishing boundaries, which would minimize the interception of returning natural spawning coho.

Adults from the net pen that stray back to either to the Johnson Creek hatchery or the Fortson Creek trap would be available as a broodstock source if needed. If the returning adults were not needed for broodstock, then they would be given to tribal members, sold to a buyer, used by the wildlife recovery center or returned to local streams for nutrient recycling.

This program modification would address a number of concerns the HSRG raised about the existing coho program that the tribe operates. We would be increasing the number of fish released and using 100% wild origin broodstock. Additionally, this program would provide a limited consistent directed harvest located in an area that would minimize the capture of wild coho during years when the run is too weak for directed in river harvests. The program would provide additional tagged fish which are more wild in origin than the current multi-generational hatchery stocks currently used as surrogate indicator stocks for North Puget Sound wild coho populations, and coho broodstock would be available to use for reseeding under utilized or newly opened up habitat.



Why can't we capture outmigrant wild coho smolts to create an indicator stock? During the operation of smolt trap in the Stillaguamish mainstem during 2001 only 3,500 wild coho smolt were captured for the whole trapping season (Griffith, per. comm.). Results from outmigrant smolt trapping done by the Tulalip Tribes in the mid-1980's documented the time, difficulty and cost associated with capturing enough wild outmigrant coho for tagging (Nelson et al., 1997.) Capturing wild coho broodstock and then rearing their progeny in a large pond would be much more efficient than trying to capture wild outmigrant smolts.

Please note that the winter run steelhead program for the Stillaguamish Tribe has been officially terminated.

Thank you for taking the time to review these proposed modifications

Kip Killebrew
Stillaguamish Tribe



Appendix E: Tulalip Tribes Full Comments

Tulalip Tribes Responses to HSRG Regional Review

Snohomish Wild Summer Steelhead

HSRG wild steelhead management zones. As indicated in the text, the citation of Pilchuck Creek and the Tolt River are examples only. The Tulalip tribes will want to review the concept of wild steelhead management zones and the selection of particular zones before this concept is implemented. Also, it should be noted that Pilchuck Creek is in the Stillaguamish system.

Tulalip Summer Chinook

The HSRG states that the program should include mass marking to help maximize harvest rates and assess straying. It should be noted that the Tulalip summer chinook are mass-marked with thermal marks on otoliths. The co-managers believe that this is the only type of mass mark suitable for assessing straying when the simultaneous contribution of several different hatchery stocks to natural spawning areas is of interest and the hatchery stocks must therefore receive a unique mark. A visible mass mark, such as an adipose finclip, is necessary for these fish to contribute to selective fisheries. During the period of feasibility testing for the suitability of the summer chinook stock for rearing at Tulalip, 100,000 fish per year are receiving a CWT and AD/clip. During this period, the comanagers believe this is the only mass mark this group should receive. If and when the summer chinook become the broodstock of choice at Tulalip hatchery then the comanagers believe it would be appropriate to discuss whether to mass mark all or part of the production with an adipose finclip.

The co-managers appreciate the commendation from the HSRG regarding the otolith marking and recovery studies. It should be noted that, as well as stray rates, this study is being used to document the contribution of Tulalip hatchery fish to the terminal fishery. This allows us to manage terminal sport and net fisheries as selective fisheries using time and area management instead of selective retention regulations. This adds an important option to the toolkit for responsible management of hatchery fish.

Tulalip Hatchery fall chinook

See above comments on Tulalip summer chinook. During the period of summer chinook evaluation it should be noted that 100,000 Tulalip fall chinook per year are receiving a CWT and AD/clip.

The co-managers believe that the program should continue at current levels pending the outcome of the study of the feasibility of switching Tulalip chinook production to the summer broodstock.

Tulalip Bay Hatchery Coho

The HSRG suggests that this program “include mass marking”. It should be noted that this program currently includes CWT and Ad/clips on 50,000 smolts per year and mass marking of an additional 250,000 to 300,000 smolts per year with Ad/clips subject to agreement between Tulalip and WDFW.