Comments on DNS 21-008 Anadromous Salmon and Steelhead Hatchery Policy C-3624 supersedes policy C-3619. SEPA comments received from March 9, 2021, through March 23, 2021. The public comments copied here were as submitted.		
Commenter or number of similar comments	Comments	Agency response
311 form letters	Dear SEPA Proposals Review, Subject: Comments for SEPA EA for Revised Hatchery ANADROMOUS SALMON AND STEELHEAD HATCHERY POLICY C3624/ Determination of Nonsignificance for DNS 20-045. The Determination of Nonsignificance for DNS 21-008 on Hatchery Policy C-3624 is a great document and we believe this is sufficient to support this new policy. Please accept this as my approval to move forward, as I am in full agreement with it. This is an important next step to make more fish for the Southern Resident Killer Whale and also for the tribal, recreational, and commercial fishing communities. This policy is long overdue and its great to see a positive change. The new hatchery policy C-3624 will not be the tool that approves specific projects but allows the information to move forward to the merits of the already highly scrutinized Hatchery Genetic Management Plans. These plans or allowable blueprint for the river systems, stand on their own merit. These HGMPs are written by the world's best scientists, both tribal and state. Then followed up by more to the world's best scientists for rigorous scientific vetting and peer review. There is a requirement process that determines compliance with state and federal laws prior to reaching the HGMP level. We approve of the SEPA review and Determination of Nonsignificance DNS 21-008, and the new Hatchery Policy C-3624. Please move forward with this so we can get to the Co-Management Policy.	Thank you for your comments. DNS 20-045 was withdrawn on January 11, 2021, and that there is no EA for this proposal.
116	Support policy	Thank you for your comments.
Bill Macaras	WDFW, I have reviewed and have a couple comments on Policy C-3624. I support this document, with the following comments.	Thank you for the comment on Guideline 7. Guideline 9's intent is not to reduce or eliminate a hatchery production.

	Policy Guideline 7. All chinook, coho, and steelhead propagated in hatcheries shall be externally marked, except: ~~a. as modified by state-tribal agreements~~; Delete this exemption, as it leads to mistrust by the public b. for conservation or other management purposes; or c. to fulfill other research needs. Policy Guideline 9. Shall the intent of this guideline be used to limit other hatchery production that may have an effect oin the system with healthy wild populations? The guideline could potentially be used by individuals or groups to limit hatchery production where it's fish have been found in the watershed of the protected system.	
Bob McMains	Please include the need for much greater control of the hazards to young salmon and steelhead(sea lions, seals, birds, etc). It does little good to increase the number of wild or hatchery fry if they have little chance of making it out to sea or returning as adults to spawn. Also it is time to be realistic about which river systems still have sufficient habitat to still support viable wild runs. A number of our rivers or tributaries should be managed as non viable for wild fish and managed for greater hatchery production. Thank you for the chance to voice my concerns.	Thank you for your comments, Predator control is beyond the scope of this SEPA.
Steve Emrich	I don't even know why I take time to write. This state is the most pathetic example of a fisheries program in the nation. Constantly putting politics and policies before anything good for fish or habitat. Use hatcheries only with fish from that river system. Use them wisely with proper amounts of smolts. Get rid of ALL Gill netting and Indian tribes illegally manufactured 50 plus % take, control sea lions and get this fishery back on its feet! But alas, as always over the decades I've been putting in my comments, I have no doubt it will just fall on deaf ears and someone will just get a good laugh as they get a paycheck to keep mis managing our natural resources. It ain't rocket science folks.	Thank you for your comments.
Randi Kyle	Unfortunately the tribe has some very bad actors within its society. They also have some very good actors that are getting a overall bad appearance due to these bad actors. Nothing will ever work unless they are patrolled 24-7. They kill, catch and waste gods creatures for their social media posts. It will only take one net to completely destroy the last 500 fish in the snake River system. Hatcheries are only going to work if dams are all removed. Hatcheries, dams will only work if you remove the tribal nets that kill 24/7/365. Then your seals are being hunted finally. If all the problems are not addressed your just peeing into the wind by adding or updating any hatchery. This situation has come due to many human choices in the past without having proper foresight.	Thank you for your comments, harvest management is beyond the scope of this SEPA.

	Human greed will destroy every aspect of the eco. Lack of complete oversight of the tribe will destroy the eco. Who's to say they aren't in it for the long run, meaning we stole it from them why not destroy it so no whitey gets it. Probably the farthest from the truth but if it was me I know which way. There are far to many humans to give one group of people the keys to the mountains and rivers. To hunt, fish and kill and waste all the while using Whiteman tools and weapons to remember the ways of their ancestors is bs. When you have the tribe and the wolves running unchecked with unlimited killing power 24/7/365 the eco gets destroyed. Sorry for straying off subject of the hatcheries but just wasting people who buy tags and licenses money unless everyone plays by the same rules. Either get your hand made nets or spear in your hollowed out log for a canoe or pony with their hand made bow and arrows or go buy a license like the any other person must do on this planet. Those without voices, gods creatures like the wildlife and fishery, will suffer as usual to hands of greedy humans. Time to quit fighting the fires with a thimble and get serious about this issue before not one fish left in the snake River for our grandchildren to enjoy. Bottom line this is the definition of racism allowing these tribes to do whatever, whenever they want 24/7/365, while the rest of the planet must follow state laws and rules. The bad actors are the problem. COEXIST WITH THE FISH!!!	
Wild Fish Conservancy	Thank you for the opportunity to comment on DNS 21-008. In reviewing the documents, and supporting materials, we have found that we need more time to adequately provide feedback on the policy relative to the State Environmental Protection Act. To that end, please see the attached document formally requesting a 30-day extension on the comment period.	WDFW responded via letter on 3/16/2012 denying the request for a 30-day extension.
Dave Croonquist Karl Pohlod Denny Clawson Brian Edmiston	After reading the WDFW press release on the new draft Commission Policy C-3624, I agree that Determination of Nonsignificance is proper and correct and want to add my support for the new policy. It is past time for the Commission and WDFW staff along, with the Co-managers, to have responsibility for the administration of the WDFW salmonid hatchery programs. As written, there are safeguards built into the policy to meet state, state-tribal, and federal salmonid management protocols. It is critical that the draft policy (C-3624) be adopted so that important steps can be taken to return natural origin fish (not "wild") to the available spawning habitat. The new policy can allow for improved hatchery management techniques, in line with the established Hatchery Genetic Management Plans, to provide for sufficient numbers of natural origin spawning populations to begin to rebuild to self-sustaining levels.	Thank you for your comments.

	The short and long-term benefits of an improved hatchery program will have a direct impact on the food base for the Southern Resident Killer Whale/Orca population which is starting to see a small increase in population number. Enhanced production levels of Chinook, Chum, and Coho salmon are now more critical than ever. Added benefits will include broader access by state recreational and commercial fishers along with helping meet the state/federal commitments to the tribal treaties. A long look at the history of salmon and steelhead production in Washington State would show, I think, that the "wild" fish of the 1890s do not exist. The mixing of stocks, alteration of run timing, cuts in production of spring/summer stocks, and the natural process of re-colonization (not returning to their natal streams) has produced, for lack of a better term, a feral salmon population. The pHOS impacts have been occurring for 125 years. To pick a certain time frame (late 1990s) and try to argue that stocks prior to that time were "wild" is a reach that needs to be re-examined. The introgression of hatchery stocks/influence has been and will continue to be huge. I would suggest a long, hard look at implementation of integrated hatchery programs using in-basin stocks will help facilitate the recovery of natural spawning populations in the available habitat. Within that program, one must also consider that a hatchery is the most efficient 'tributary" for salmonid production in the river basin it is operating in. As previously stated, I fully support the new Commission Policy C-3624.	
Ken Townsend	I have read and agree that the Determination Of Nonsignificance (DNS) is correct for DSN 21-008: Anadromous Salmon And Steelhead Hatchery Policy C-3624 which supersedes Policy C-3619. The increased use of Washington State Salmon and Steelhead Hatcheries with IN-BASIN Broodstock is vitally important to assist with the recovery of In Basin Natural Origin Stocks of Salmon and Steelhead. For years I have listened to Groups and NaySayers complain that In Basin Broodstock used for Hatchery Production are Inferior to Natural Origin Fish. A couple of the more common complaints concerning Hatchery Production of Salmon and Steelhead is that the Hatchery fish are inferior to the Natural Origin fish and that the Hatchery fish will compete for the available food source. I disagree with that way of thinking and I will refer to THE COMPREHENSIVE MANAGEMENT PLAN FOR PUGET SOUND CHINOOK: By The Puget Sound Tribes and the Washington State Department Of Fish And Wildlife. MANAGEMENT UNIT STATUS PROFILE STILLAGUAMISH RIVER PAGE 160, half way through paragraph 1 of the Hatchery Recovery Program Section. " During 2011-2015, Broodstock spawning ranged from 105 to 115 summer adults averaging around 1:1 ratio of Natural Origin (NOR 48%) to Hatchery Origin (HOR 51%) adults (Stillaguamish Tribe Unpublished Data). GENETIC TESTING has CONFIRMED that PROGRAM fish are INDISTINGUISHABLE from Wild Origin Fish (Eldridge and Killebrew 2008). To Underfund, Defund or not utilize The Hatcheries of Washington State to capacity to assist with the rebuilding of Natural Origin Salmon and Steelhead stocks is a serious mistake. More Hatchery Production means more feed for the Orca Population and more	Thank you for your comments.

	fish available for the Tribes, the Sportsman and the Commercials. With it being confirmed that Hatchery Fish , raised from Captive Broodstock are Indistinguishable from Wild Origin Fish from the same River Basin, it does not make any sense. The time is now to increase the production of Broodstock Hatchery Salmon and Steelhead.	
DeWayne Pitts	Revising Policy C-3619 (Policy. Please leave the Policy in effect and maintain policy guidelines 1, 2, and 3, which are being proposed to be suspended. I have read the original policy report on C-3619 and it is clear there is much work to do to meet the goals of the original policy. Removing guidelines of the Hatchery Scientific Review group does not make sense to me and appears to loosen scientific overview of the hatchery program. We should allow more time for the current policy to affect salmon populations and management and not move forward with C-3624 Please also consider managing all 159 hatchery programs as conservation hatcheries instead of only 35 of the 159. This makes more sense for the long term viability of all species of salmon and in particular native stocks. If it is helpful to know demographics of commenters, I am a lifelong recreational fisherman who has been fishing for salmon in Ocean, Puget Sound and River waters since the 1970's/	Thank you for your comments. We will consider your comments during phase 2 of this process. The policy under SEPA review reestablished policy C-3619 in its totality, including Guidelines 1-3.
Fred Zingleman	We the citizens of Washington State Haven't had a Science based Director of the WDFW since Dr. Bern Shanks, (think about that) we've had a lot of Governor appointed "YES" men, and that's how we are in this mess today. Endangered salmon runs, Extinct steelhead runs, Loss of Kelp, Missing years of Herring, and starving Orcas. Help can't be delayed any longer, it's time to build better more efficient hatcheries. Remember it takes 4 to 5 years to see the results. I sincerely you are up to the task…..	Thank you for your comments.
Steve Bashakis	I would like to see certain rivers (Skykomish, Snoqualmie, Green and Puyallup) close to the Seattle -Tacoma-Everett areas designated as super enhanced by hatcheries to give the masses of fishermen close by an opportunity to fish for and CATCH steelhead and salmon. These rivers are already effected negatively by development and are going to be further impacted in the coming years making wild salmon and steelhead a mere myth here. To me it seems that a concentrated hatchery effort here would keep local fishermen closer to home and thus leave more areas that still have good salmon and steelhead habitat viable for wild stocks. The Stillaguamish and Skagit still have good habitat for wild stocks and could be managed that way with special emphasis on Skagit for winter run steelhead and on the Stillaguamish for summer run steelhead and salmon of wild stock. Then angler's would have a choice and an understanding of what is being emphasized and where, and then fish accordingly to the challenge or goal they are seeking. Ideally the wild stocks will be mostly left alone, recover to strong levels and fished for sport only, not for the table. The Olympic Peninsula should be catch and release only and only wild stocks. It should be the strongest environment for wild salmon and steelhead with the best, most consistent environment that will not change. Thank you for taking the time to read this lifelong Washington state fisherman's thoughts!	Thank you for your comments, harvest management is beyond the scope of this SEPA.

Charles Malmgren	Dear Wildlife Commissioners, I am again advocating modifications to hatchery policy to provide large Chinook Salmon for our Southern Resident Killer Whales. Please stop the current random spawn protocol and start selecting brood stock for size. Our SRKW evolved eating Chinook salmon because they were widely available and of a size justifying the effort. Assuming 450# of salmon per day as a reasonable diet, one would only need 15@ 100cm Fork Length Chinook. They currently need to chase down, catch and consume 50 average Puget Sound hatchery Chinook. The Department's hatcheries are currently being managed under a Random Spawning Protocol which has reduced the age and size of returning adults. I have included in my submission two studies which specifically show that to maximize numbers of returning fish, a random spawning protocol should be used. If the goal is to maximize the return of large, Orca sized adults, Male greater than or equal to Female size sorting is necessary. This sorting coincidentally matches what happens in the wild. The Orca don't just need numbers, they also need size. An investigation of published Coded Wire Tag returns shows that out of 204,000 Hatchery Chinook returning in the last 5 years, only 185 met the threshold desired for SRKW: 100cm Fork Length. Using the Department web site, sorting for Chinook, years and size you will see how very few large, Orca sized Hatchery Salmon return to our waters. https://data.wa.gov/Natural-Resources-Environment/WDFW-Coded-Wire-Tag-Fish-Recoveries/auvb-4rvk/data The CWT data indicates that if the Department used all of the SRKW earmarked funds under the current spawning protocols the return to Puget Sound might be 185 appropriately sized Chinook. The attached Mark Selective data indicates this number might be much lower. This is literally a drop in a bucket. Please consider the studies, the CWT and MS data. I sincerely hope that the funds entrusted to the WDFW Hatchery System are not wasted. If the hatchery protocols were to be changed, up sized hatchery origin returns would be available within 5 years, far sooner than any returns from efforts to enhance Natural Origin Chinook could be expected.	Thank you for your comments, we will consider your comments during phase 2 of this process. We do have plans to conduct similar research to what is described in the literature you provided us.
John Corso	Clearly, your broad and thorough proposal for updating anadromous salmon and steelhead hatchery policy is timely. As a conservation-oriented, sports fisherman who likes to eat fish, I target hatchery or non-native fish while trying to avoid catching indigenous, wild fish and releasing them when I suspect I have caught one. I have two suggestions for this proposed hatchery policy update.	Thank you for your comments. We use both hatchery- and natural-origin broodstock in our integrated programs. The goal of these integrated programs is to have

	First, I have mixed thoughts about harvesting wild fish that are listed as endangered, threatened or species-of-concern to raise as hatchery brood stock. In these cases, every fish is extremely important. Given that we have learned that many runs of wild fish do not adapt well to a hatchery environment as brood stock and/or young fish, I am concerned that the proposal does not appear to challenge the Washington Department of Fish and Wildlife to reconceptualize the design of hatcheries to better meet the demanding needs of wild fish. Please consider explicitly pushing the WDFW to modify the design of existing hatcheries and build new hatcheries that better meet the needs of the wild fish. Second, it is my understanding that most anadromous fish return to their natal spawning beds when possible while a minority choose to spawn in a different location. Better understanding this minority reproductive behavior may be important to better understanding the evolution of anadromous fish and how they are responding to a warming climate. Hatcheries are in a unique position to play an important role in helping us better understand how fish migrate throughout the north Pacific region, exchange genes, spread infectious diseases, etc. Please consider explicitly pushing WDFW to better-track a larger percentage of hatchery-raised, anadromous fish from the hatchery through adulthood to help us do a better job of helping them and avoiding harming them further.	the natural origin fish drive the gene pool. We use this method to help rebuild depleted natural origin stocks. As far as studying the straying of salmon, this is beyond the scope of this policy but thank you for your suggestion.
Adam Cooper	• MAKE MORE FISH • PUT BARREL HATCHERIES ON SMALL STREAMS • INTRODUCE NEW GENETICS TO MAKE EXISTING FISH STRONGER • MAKE MORE AND BIGGER HATCHERIES • MAKE ALL DAMS HAVE FISH PASSAGES THAT WORK. NO TRUCKING. (IF NOT REBUILD AND REMOVE OLD ONES) • KILL SEAL THAT ENTER THE RIVER SYSTEMS MORE THAN A FEW MILES FROM THE OCEAN	Thank you for your comments, some of your recommendations are beyond the scope of this SEPA.
Ross Barkhurst	This SEPA review needs to preserve the hatchery policy draft as is. That is the path to restore ESA species of salmon and steelhead, and to avoid such listing for species on the downslope. The margin to such listing is getting slimmer, for example in Willapa Basin for Coastal Fall Chinook and Coastal Coho. For example Coastal Fall Chinook have been listed as " subject to overfishing". This is a warning shot by the feds across our bow. It is not a signal that "gee, we have more margin to eat up." This is the way these fish have been treated for years. In Willapa these fish have not met basin escapement goals since 2010, when many of the hatchery returns were not even marked. Overharvest against the Willapa Policy has taken place without payback. Millions of Chinook smolts have been hatched in different hatcheries without anything resembling the Risk Analysis so wisely called for in the subject policy and while ignoring the Governor's ORCA Task Force finding that estuarine carrying capacity must be inventoried prior to planting more fish in said inventory. The WDFW Commission has just authorized a 43% increase in wild Chinook harvest mortality for these fish in Willapa Basin this coming season. The Fish Department refuses to run the AHA model to show if and when wild Chinook would ever achieve escapement	Thank you for your comments. Harvest management is beyond the scope of this policy.

	goals with the present approach in Willapa Bay. The Governor's task force has just reported that current ESA Chinook are not recovering in the rest of our state. This we hope was the last gasp of the " wild fish restoration does not matter" crowd. The previous WDFW Commission " stood down" from HSRG hatchery standards several years ago. At present, wild Chinook crossing our Willapa bar are less than escapement BEFORE estuarine harvest, now allowed at 20% instead of 14%, even would begin. Massive increases in hatchery Chinook, without a Risk Analysis, attract non selective gillnet harvest which experience has shown cannot be sustained. Our Coho runs, previously considered somehow bullet proof, have now missed escapement to the Willapa Basin four out of the last five years. Lack of implementation of a hatchery policy even resembling Best Available Science is clearly a major contributor here. Coastal Coho are in trouble. Hatchery origin fish are placed in nest boxes and go to sea unmarked. If they escape harvest upon return they are counted as "wild Coho". As Best Available Science still tells us, these simulated wild Coho do not perform as wild fish. During the Commission review of subject policy recently, the lead scientist working on subject policy was asked " what is best available science today?" His answer was " HSRG". This is the same HSRG abandoned several years ago. To my knowledge there was no "SEPA Review" of this abandonment at that time. This leaves the public and the resource in the Orwellian position of needing a positive SEPA Review to reinstate Best Available Science which was officially removed without one. Or should we say TWO SEPA reviews! A second has been prescribed for more detailed procedures to implement subject policy should it survive the first. I believe our hatchery personnel are capable of carrying out their duties should they get the signal loud and clear from management that Best Available Science is here to stay. Please do not delay this overdue turnaround any further with a second review of operating procedures. We can soon find out if WDFW management is capable of overseeing this turnaround. I have participated as an Advisor to the creation of the current Willapa Salmon Management Policy. I have participated as an advisor in the implementation of this for several more years. I have attended many WDFW Commission meetings and seen first hand the never ending deviations from policy and Best Available Science, from ignoring HSRG to ignoring estuarine habitat impacts on our resource. I believe the WDFW Commission as now constituted is capable of requiring the meaningful implementation of this new hatchery policy not only where ESA has arrived, but where it is around the corner. This policy passed the Commission review. The Governor's Advisory group on salmon recovery has just reported that most ESA chinook salmon and steelhead now listed are not recovering. Without Hatchery supplementation that follows the path well laid out in subject new policy, I believe our decision makers know we will lose what we have left. The public will demand it. At last all the pieces are in place. Leave this Hatchery Policy in place as is with just this one review.	
Wild Fish Conservancy	Letter attached	1st Point - Any policy or initiative taken by the FW Commission or the agency

		that has the potential to affect the environment will undergo a separate SEPA review process. Specifically, for the Southern Resident Orca (SRO) prey initiative, this policy does not direct the agency to increase hatchery production in an effort to increase prey for SRO. Guideline 6 instructs the agency to "consult with Tribal Co-Managers and work with the National Marine Fisheries Service to develop an implementation plan. The guideline also requires that the agency use the appropriate stocks ("genetic strains") and for the hatchery programs to "be appropriately located and sized to effectively provide prey to endangered SROs in concert with recovery plans for threatened wild salmon and steelhead This policy anticipates that the potential environmental effects of the SRO prey initiative will be suitably reviewed by state and federal agencies.

		2nd Point - The technical procedures document will include details on the implementation and reporting associated with the adaptive management plan. This policy instructs the agency to complete the technical procedures document within a year. All other benchmarks associated with the policy will be established through the technical procedures document. Hatchery Management Plans (HMP) will be drafted after the technical procedures document is completed. Until specific HMPs are finalized and approved, the agency will operate under C-3619, as it existed June 14, 2018. 3rd Point - Section 4 of the Policy Guidelines states "Each HMP shall be based on the best available science on the risks of hatchery production on wild salmon and steelhead…" This guideline also states the agency will use a "science-based risk management

		framework to quantitatively address risks and benefits of hatchery production and incorporates uncertainty in the estimates of the risks and benefits." This policy is a high-level document that is not intended to provide specific details but instructs the agency to develop a technical procedures document. This document will contain implementation details relevant to all Guidelines, including Guideline #9. WDFW Commission anticipates that developing and implementing Guideline #9 will require additional agency resources, new data, and analyses. Therefore, the WDFW Commission is requiring the agency to seek adequate funding to complete this task. 4th Point - Goals of this policy "shall be the conservation of natural resources, including the conservation and recovery of depressed coincident wild salmon and steelhead populations…" and, "provide

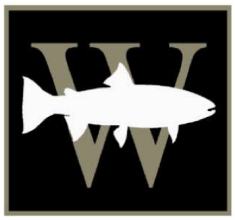
		an elevated level of protection to the relatively few populations that meet this premium status so as to prevent negative coincident hatchery-related impacts." This is a high-level policy and conservation measures will be addressed during the development of the technical procedure document and the structured decision-making process that will be part of the phase 2 SEPA process. The details of managing hatcheries will be part of the technical procedures document and the structured decision-making process. There are many actions that the agency could implement that may confer protection to wild salmonids. These actions do not need to be directly associated with this policy. Nevertheless, the goal of this policy is to establish an appropriate balance between minimizing genetic and ecological risks to coincident wild populations and providing for the ecological and societal benefits of hatchery

		propagated salmon and steelhead. This policy requires that the agency implements a science-based risk management framework to quantitatively address risks and benefits of hatchery production and incorporates uncertainty in the estimates of the risks and benefits. Decisions concerning hatchery management will be through a structured decision-making process. All details will be provided in a technical procedures document, which will undergo separate SEPA evaluation. Final point – A structured decision-making process is a fundamental component of this policy. This process will make transparent any management actions associated with this policy. All science that contributes to these management actions will be available and the management actions can be scrutinized to determine if the best available science was

		used. The structured decision-making process will occur during the same time that the technical procedures document is being developed and will be incorporated into the document. The technical procedures document will undergo a separate SEPA evaluation, providing the public opportunities to voice their support or detail their concerns about the technical procedures the agency will use to manage their salmon and steelhead hatcheries.
Wild Steelhead Coalition	Letter attached	Thank you for your comments. C-3624 the subject of this SEPA review is a high-level directive to the agency. It directs the agency to return to C-3619, in its entirety, until individual Hatchery Management Plans (HMPs) are developed for each program. These HMPs will be based on a technical procedures document, which will undergo its own SEPA process. The technical procedures document will make use of a science-based

		risk management framework to quantitatively address risks and benefits of hatchery production and incorporates uncertainty in the estimates of the risks and benefits. A structure decision-making process will use used to help design management actions and will enable a transparent decision-making process.
Native Fish Society	Letter attached	Thank you for your comments and providing an extensive list of potential risks to wild fish from hatchery operations. . C-3624 the subject of this SEPA review is a high-level directive to the agency. It directs the agency to return to C-3619, in its entirety, until individual Hatchery Management Plans (HMPs) are developed for each program. These HMPs will be based on a technical procedures document, which will undergo its own SEPA process. The technical procedures document will make use of a science-based risk management framework to quantitatively address risks and benefits of hatchery production and incorporates

		uncertainty in the estimates of the risks and benefits.
Jim Byrnes	Letter attached	Thank you for your comments. C-3624 the subject of this SEPA review is a high-level directive to the agency. It directs the agency to return to C-3619, in its entirety, until individual Hatchery Management Plans (HMPs) are developed for each program. These HMPs will be based on a technical procedures document, which will undergo its own SEPA process. The technical procedures document will make use of a science-based risk management framework to quantitatively address risks and benefits of hatchery production and incorporates uncertainty in the estimates of the risks and benefits. A description of an adaptive management process will also be included in the technical procedures document. A structure decision-making process will use used to help design management actions and will enable a transparent decision-making process.



Wild Fish Conservancy
NORTHWEST
SCIENCE EDUCATION ADVOCACY

March 23rd, 2021

Lisa Wood, Washington State Environmental Policy Act Coordinator
Post Office Box 43200
Olympia, WA 98504-3200
Delivered electronically to: SEPAdesk2@dfw.wa.gov
Re: Comments to the SEPA process for Fish and Wildlife Commission Policy C-3624

Dear Ms. Wood,

We want to thank the Department for the time and effort it has spent on its revisions to the state's Anadromous Salmon and Steelhead Hatchery Reform Policy (now C-3624). We believe the language in the latest version of this policy is much improved over the previous revisions to C-3619, which have now been withdrawn by the Department. Nevertheless, we oppose the proposed determination of non-significance, unless WDFW makes a few relatively modest, but absolutely essential, modifications to C-3624. We appreciate the attention WDFW has given to the concerns that we have raised previously, and hope that Department will give similar serious consideration to these comments.[1]

We are glad to see that the new policy language embraces a commitment to developing a science-based risk management framework which will go through its own SEPA process. Obviously, there is much work left to do to develop the envisioned technical procedures and adaptive management framework, but we are encouraged to see that the intent seems to be to reinstate the HSRG guidelines and other policy precautions that protect wild fish from the environmental impacts of hatcheries until those foundational documents have been finalized. We look forward to providing constructive comments during those future portions of the phased review process. In the meantime, we believe that with a few adjustments and clarifications, the Department's determination of non-significance could be accurate and appropriate for the portion C-3624 now under review.

[1] Our prior comments on SEPA # 20045 are attached again here for incorporation into the record as some issues previously discussed are still outstanding. We were not able to provide our full analysis because of the Department's delay in responding to our public records request related to the development of this policy and prior SEPA processes related to hatchery policy. We are still waiting for delayed PRR responses and do not know the extent to which those records might also bear upon our current comments, but we will update the Department if we identify any additional concerns after reviewing those records.

First, it is essential that the exceptions in Policy Guideline #4 be removed as to all programs, plans, and initiatives that have not previously undergone SEPA review, so that the policy reverts back to the version of C-3619 that was in place on June 14, 2018. Currently, policy Guideline #4 reads:

> "Until the HMPs are prepared and approved in accordance with this Policy, existing hatchery operational plans, goals and objectives in effect on June 14, 2018 shall remain intact as current policy direction, **except as modified in accordance with watershed specific policies or initiatives adopted or modified by the Commission since that date**, such as the Columbia River Salmon Fishery Management Policy, the Willapa Bay Salmon Fishery Management Policy, and the 2018 SRO prey initiative."

This exception is so broad that it would swallow the intent of the new C-3624 policy, by incorporating a variety of policy changes and new programs that have not been subjected to SEPA review. If the Department wants to make exceptions to the phased environmental review process described in C-3624, then those exceptions should be specifically enumerated, and the environmental impact of each must be separately reviewed under SEPA. Without this modification, a finding of non-significance would allow a variety of unnamed "policies or initiatives" to evade SEPA review. This is clearly unacceptable under the law, and dangerous as a matter of public policy, especially given consideration of the unpredictable near-term fluctuations in environmental factors that affect salmon and steelhead abundance that C-3624 acknowledges.

Most concerning of the exceptions under Guideline #4 is the exemption for the Southern Resident Orca (SRO) prey initiative. The environmental impacts from the substantial increase in hatchery production proposed through the SRO prey initiative have yet to be assessed through SEPA, and the initiative requires an Environmental Impact Statement ("EIS") to determine if its controversial actions will harm threatened and endangered fish species—and whether they will actually help SRO.[2] WDFW could not permit the massive increases in hatchery chinook production provided for under the SRO prey initiative under C-3619, because the HSRG percentage hatchery origin spawners (pHOS) thresholds would be impossible to meet, and such increases would inevitably undermine wild chinook recovery efforts. This initiative thus violates the intent, guidelines, and goals of the C-3619 policy (as it was written on June 14, 2018), and it must go through its own SEPA process before it is put into action through the non-routine taking of adult fish for broodstock or the release of juvenile fish.

Second, specific deadlines and detailed reporting mechanisms should be developed for the phased review process described in C-3624, and WDFW must allocate adequate resources and funding to meet these targets. During the SEPA process for C-3619 more than 10 years ago, WDFW promised to develop Hatchery Action Implementation Plans that would go through their

[2] The SEPA checklist illustrates our concern with a notable exception of its own: "Policy C-3624 provides no direction in terms of changes in hatchery production**, except with the possibility that production associated with the SRO prey initiative may increase production.** Therefore, the policy itself will not result in effects to plants, animals, fish, or marine life." Checklist at D.1. (emphasis added).

own SEPA process, but none were actually developed. As a result, the environmental impacts of most state-managed hatchery programs have never been reviewed through SEPA. In addition, the annual written reports describing C-3624 implementation, which are supposed to inform the program's "Adaptive Management," are vague and inadequate. To assure that WDFW is on the path to correcting these deficiencies, we urge C-3624 to require:

- Annual policy implementation reports which detail how hatchery programs are complying with environmental safeguards such as environmental regulations for passage, water intake screening, percentage hatchery fish on the spawning grounds, and pollutant control systems, and;

- Deadlines for when each of the benchmarks will be met, and annual reports about the progress toward each of these goals.

Third, we recommend that the Department incorporate a specific requirement to follow the "best available science" into Policy Guideline #9. As written now, the guideline uses subjective language, including "substantial genetic modification," "healthy condition," and "relatively high-quality habitat." The guideline provides no process for identifying the "premium" populations which will receive "an elevated level of protection" from hatchery impacts, and only commits the Department to "seek funding for a process to identify such populations." It is not possible to evaluate the environmental impacts of this new policy guideline without more information and specificity. At the least, we recommend that WDFW incorporate a specific section that requires it to use the "best available science" to determine these key accountability thresholds.

Fourth, we urge the Department to reinstate key conservation measures into C-3624 that existed in C-3619, including commitments to establishing wild fish management zones, to developing guidance for the artificial propagation of species other than salmon and steelhead, and for developing statewide plans to implement alternative commercial fishing gear that will reduce bycatch impacts and provide for more selective harvest of target species. Although each of these initiatives may have to undergo SEPA before they are implemented, it would be taking a step backward for the Department to eliminate them. We urge that these conservation measures, and any others omitted from policy-3624 are reinstated, or incorporated under other policies before they would be abandoned by adopting C-3624.

Finally, we urge the Department to require an independent scientific review of the Hatchery Management Plans prior to submitting them for the SEPA phased review process, such as through the Hatchery Science Review Group. WDFW owns and operates one of the country's largest hatchery production infrastructures, and as evidenced by its (self-identified) ineffectual hatchery reform measures to-date, the potential for conflict of interest is inescapable. We recommend adopting an independent review process which will reinforce the soundness, of the Hatchery Management Plans, and reassure the public that the best available science has been used in their development.

WFC thanks the Department for developing a much-improved policy, and hopes that it makes the above modifications, so that we can support the determination of non-significance. We look forward to working with the Commission and the Department to make

the necessary changes to meet the requirements of WDFW's mandate to preserve wild fish and their ecosystems.

Respectfully submitted,

Kurt Beardslee, Executive Director
Wild Fish Conservancy
kurt@wildfishconservancy.org; 206.310.9301

Pete Soverel, President
The Conservation Angler
16430 72nd Ave West
Edmonds, WA 98026
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Wild Fish Conservancy
NORTHWEST
SCIENCE EDUCATION ADVOCACY

October 20, 2020

Director Kelly Susewind
Kelly.Susewind@dfw.wa.gov
Washington Department of Fish and Wildlife
PO Box 43200
Olympia, WA 98504-3200

Cc:

Laurie Peterson, Fish Science Division Manager, Washington Department of Fish and Wildlife, laurie.peterson@dfw.wa.gov

Lisa Wood, SEPA Responsible Official, SEPA/NEPA Coordinator, and HPA Appeals Coordinator, Washington Department of Fish and Wildlife, SEPAdesk2@dfw.wa.gov

Washington Fish and Wildlife Commission, commission@dfw.wa.gov

Nichole Kloepfer, Executive Assistant, Washington Fish and Wildlife Commission, Nichole.Kloepfer@dfw.wa.gov

Mike Grossman, Assistant Attorney General, mikeg1@atg.wa.gov

Re: Supplemental Comments Regarding Revisions to Fish and Wildlife Commission Policy C-3619 (SEPA #20045)

Director Susewind,

I am writing on behalf of the Wild Fish Conservancy (WFC), to once again urge the Washington Department of Fish and Wildlife (WDFW) to fulfill its statutory obligation to fully consider the potential adverse impacts before adopting significant alterations to C-3619, the Anadromous Salmon and Steelhead Hatchery Policy (Hatchery Policy Revision).

The policy changes are likely to have lasting adverse impacts on Washington's fish and wildlife, including threatened and endangered salmon and steelhead, and the Southern Resident Killer Whales that depend on them. Given the fragility of these populations, such an adverse impact could be catastrophic, undermining federal, state, tribal, and public efforts to recover wild salmon and steelhead populations that can support sustainable fisheries and protect Southern Resident Killer Whales from extinction. This is a poor trade-off for the assumed short-term

increase in fishing opportunities and conservation / mitigation benefits that the policy changes are purported to provide.

As detailed in WFC's comments to SEPA #20045 submitted on October 12, 2020, and its comments to the proposed policy change submitted to the WA Fish and Wildlife Commission on July 28, September 7, and October 12, 2020, the Hatchery Policy Revision ignores the conclusions and recommendations of its own scientists and disregards the conclusions provided in WDFW's Hatchery and Fishery Reform Policy Implementation Assessment, completed earlier this year. In addition to contradicting WDFW's own hatchery reform science, the Hatchery Policy Revision is at odds with federal Endangered Species Act recovery plans, regional salmon recovery plans, and hatchery genetic management plans.

What WFC did not know when it submitted these prior comments is that WDFW has apparently *never* conducted an environmental review of its hatchery policies as required by the State Environmental Policy Act (SEPA), despite past commitments to do so. A decision to move forward with further significant hatchery policy revisions without performing a thorough environmental review would be indefensible under SEPA, and represent abrogation of the Commission's solemn duty to "preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities."

Background on Information Included in Supplemental Comments

These supplemental comments are based on information that WDFW declined to make available during the SEPA review process, which WFC was not able to obtain until after the October 12, 2020 deadline for comments for SEPA #20045, WDFW's Determination of Nonsignificance (DNS) for the Hatchery Policy Revision. As a result, WFC asks that these comments be considered as part of the file for SEPA #20045, as well as in the agency record for the final decision on the Hatchery Policy Revision.

On September 22, 2020, WFC asked WDFW SEPA Coordinator Lisa Wood to provide any prior SEPA documents related to C-3619, so it could review these foundational documents in preparation for making comments on WDFW's DNS for the Hatchery Policy Revision. The next day, Ms. Wood indicated that WDFW would not agree to make these documents available to the public as part of the SEPA process for changes to C-3619, indicating that they would only be provided in accordance with a formal public records request.

On September 25, 2020, WFC thus submitted a public records request to WDFW for "All SEPA documents relating to WDFW's existing C-3619 'Hatchery and Fishery Reform Policy' as adopted in November of 2009, and updated June 15th, 2018." (PRR No. 20469). While WDFW made an effort to respond to this request in a timely manner, it mistakenly sent its response to the wrong email address on October 2, 2020. Consequently, WFC did not receive WDFW's first response to the request until October 14, 2020, two days after the deadline for comments in connection with SEPA #20045. As a result of this error, the comments that WFC submitted on

SEPA #20045 on October 12 were not informed by the materials contained in these public disclosure documents.

Public Disclosure Information Indicates Past Evasion of Environmental Review

The documents produced by WDFW's first response to PRR No. 20469 indicate that the state's hatcheries policies have *never* undergone the meaningful environmental review required by SEPA. Instead, these records indicate WDFW has continued to evade this statutorily mandated review through a variety of means, including issuing determinations of nonsignificance that were not supported by the facts, making promises of future environmental review that, to our knowledge, it has never fulfilled—and, at times, ignoring its legal responsibilities under SEPA entirely.

This pattern began on June 2, 2009, when WDFW issued a DNS for its original Hatchery and Fishery Reform Policy (Hatchery Reform Policy). *See* Attachment 1, Revised Determination of Nonsignificance for 2009 Hatchery and Fishery Reform Policy (SEPA log 09-054rev) (June 22, 2009) (indicating initial DNS was prepared on June 2, 2009) and Attachment 2, Environmental Checklist for Hatchery and Fishery Reform Policy (as prepared June 2, 2009 and revised June 22, 2009).

WDFW first insisted that the Hatchery Reform Policy was not likely to have a significant adverse impact on the environment because it was only meant to provide "guidance and support" for WDFW's implementation of the Hatchery Scientific Review Group recommendations. *See* Attachment 1 at page 2 (language of original DNS).

However, the public was not convinced, as is apparent from the objections to the DNS that WDFW has thus far provided to WFC.[1] For example, the Snoqualmie Indian Tribe protested that WDFW was evading SEPA through a "mischaracterization of the proposal as merely a 'policy' to 'provide guidance and support' to the hatchery and fishery reform effort." *See* Attachment 3 at page 1. The Tribe concluded that "[u]pon closer scrutiny of what your proposal actually entails, it looks as if the proposal will involve the implementation of certain actions that may have an adverse environmental impact that should be considered through the SEPA process." *Id.* As the Tribe observed, instead of subjecting its preferred proposal to the rigorous comparison of alternatives required under SEPA, WDFW bypassed that process and simply "identified its preferred solution as the proposal." *Id.* at 2; *see also* Attachment 4 at page 1 (letter from Tulalip Tribe, emphasizing that "some careful and thoughtful analysis of alternatives is required before adopting blanket policies" such as those contained within the Hatchery Reform Policy);

[1] Because WDFW's response to WFC's document request is ongoing, WFC does not know whether there were more public objections to the 2009 DNS that WDFW has not yet provided.

Attachment 5 (letter from Laura Hudson, contending that a "full EIS is required to show why hatcheries should continue in the face of all the evidence of the damage they do").

In apparent response to these objections, WDFW revised its DNS to assure the public that there would be full environmental review of subsequent plans and specific actions taken under the Hatchery Reform Policy. In a Revised DNS issued on June 22, 2009, WDFW promised to develop Hatchery Action Implementation Plans (HAIPs) for each region of the state, which would "move through the SEPA process" upon completion. *Id.* at 1 (language added to DNS with June 22, 2009 revision). WDFW further indicated it would "initiate SEPA" on further work products associated with the Hatchery Reform Policy, which would "describe in more detail potential environmental impacts" and provide "more descriptive effects related to activities or actions under consideration for full implementation." *Id.* at page 2 (promising that "as more defined information is developed associated with some of the identified work products within the DRAFT, additional SEPA would be initiated").

We expect PRR No. 20469 submitted by WFC to WDFW will include the HAIPs developed for each region, and their associated SEPA review documents, but none have been provided as of the date of this letter.[2] To WFC's knowledge, these HAIPs were never finalized or submitted for SEPA review, and no subsequent SEPA review has been conducted on any of the actions taken under the 2009 Hatchery Reform Policy over the past decade.

To the contrary, WDFW has spent the past decade causing genetic, ecological, fishery, viral/disease, and water quality impacts in the name of its Hatchery Reform Policy, without subjecting any of these actions to environmental review required by SEPA. Indeed, in 2018 WDFW suspended some of the key environmental protections under the Hatchery Reform Policy, without even making a token DNS. *See Hatchery and fishery reform policy review,* Washington Department of Fish and Wildlife, *available at*: https://wdfw.wa.gov/fishing/management/hatcheries/hatchery-reform-policy-review#:~:text=The%20Policy%20was%20originally%20adopted,the%20implementation%20of%20hatchery%20reform (last visited Oct. 19, 2020). The Commission thus ignored its SEPA obligations entirely when making a decision that for salmon species, it would abandon its previous commitment to use the "principles, standards, and recommendations of the Hatchery Scientific Review Group regarding hatchery operations." *Id.*

With its current DNS for the Hatchery Policy Revision, WDFW is thus continuing a longstanding practice of ignoring its obligation to carefully consider the environmental impact of its hatchery policy. SEPA requires that state agency consider "total environmental and ecological factors to the fullest in deciding major matters." *Eastlake Cmty. Council v. Roanoke Assocs*., 82 Wn.2d 475, 490, 513 P.2d 36 (1973). Yet WDFW has seen fit to develop, amend, and implement a comprehensive hatchery policy over the space of more than a decade, without *ever* conducting

[2] If these HAIPs do exist, and went through SEPA evaluation, then they certainly should have been disclosed, discussed, and analyzed during the consideration and SEPA review of the Hatchery Policy Revision.

a full environmental review of that policy, revisions to that policy, or actions implementing that policy.

As WDFW acknowledged in the 2009 DNS for its Hatchery Reform Policy, "[i]f properly-managed, hatcheries can provide significant benefits to the citizens of Washington. If managed improperly, they can confound efforts to rebuild wild salmon populations and undermine efforts to recover wild fish." Attachment 1 at page 1. Indeed, WDFW's own scientific review, requested by the Commission, details the litany of adverse environmental impacts that hatchery programs can cause. *See A review of hatchery reform science in Washington State*, Final report to the Washington Fish and Wildlife Commission (Jan. 23 2020), *at*: https://wdfw.wa.gov/sites/default/files/publications/02121/wdfw02121_0.pdf.

Without ever having conducted an environmental review of adverse ecological impacts and potential alternatives, how can WDFW be confident that it is managing state hatcheries properly? The answer is that it cannot, and by its own admission, such an error can have catastrophic consequences.

WFC urges WDFW and the Commission to put the brakes on the poorly considered and scientifically unsupported Hatchery Policy Revision. WDFW and the Commission should reject the Hatchery Policy rewrite and reinstate the Hatchery Reform Policy in full, including the provisions that were revoked in 2018 without SEPA review, until WDFW completes a full Environmental Impact Statement on its proposed revisions.

It is long past time that WDFW takes an approach to management of its hatcheries that complies with the law, follows the science, and fulfills the requirements of WDFW's mandate to preserve wild fish and their ecosystems.

Respectfully submitted,

Kurt Beardslee, Executive Director
Wild Fish Conservancy
kurt@wildfishconservancy.org; 206.310.9301

Attachments:

Attachment 1. Revised Determination of Nonsignificance (RDNS) for 2009 Hatchery and Fishery Reform Policy (SEPA log 09-054rev) (June 22, 2009)

Attachment 2. Environmental Checklist for Hatchery and Reform Policy (prepared June 2, 2009, revised June 22, 2009).

Attachment 3. Snoqualmie Tribe's Comments on Proposed Hatchery & Fishery Reform Policy (June 15, 2009).

Attachment 4. Letter from Tulalip Tribe re 2009 Hatchery and Fishery Reform Policy (June 17, 2009).

Attachment 5. Email from Laura Hudson Re proposed DNS for Hatchery Reform Policy (June 18, 2009)

Attachment 1

STATE OF WASHINGTON
DEPARTMENT OF FISH AND WILDLIFE
Mailing Address: 600 Capitol Way N – Olympia, Washington 98501-1091 – (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building – 1111 Washington Street SE – Olympia, WA

REVISED DETERMINATION OF NONSIGNIFICANCE (Revised DNS)

The Department of Fish and Wildlife (WDFW) has considered comments received on the original Threshold Determination for this project and is providing additional information that may be of interest to other agencies or the public. The information provided does not substantially change the analysis of the significant impacts in the existing environmental checklist.

Name of Proposal: PROPOSED HATCHERY AND FISHERY REFORM POLICY

Description of Proposal:
A Commission policy on hatchery and fishery reform will provide guidance and support for the Department's implementation of Hatchery Scientific Review Group recommendations by clearly stating the Commission's commitment to long-term hatchery and sustainable fishery strategies. Hatchery and harvest reform are critical to sustaining healthy fisheries and the future of fishing in the state of Washington.

Hatchery reform has been an ongoing initiative in Puget Sound and Coastal Washington state for several years. Hatchery Reform was initiated in the Columbia River in 2007. The Department has embraced hatchery reform as a means to achieving salmon recovery while maintaining economically important harvest opportunities. The Department believes that hatchery production at levels similar to today can be maintained at most facilities and at the same time provides protection for wild fish and the recovery of wild stocks. If properly-managed, hatcheries can provide significant benefits to the citizens of Washington. If managed improperly, they can confound efforts to rebuild wild salmon populations and undermine efforts to recover wild fish.

In addition the following clarifications have been made to the initial SEPA Checklist, Dated- June 3, 2009:

4. Date checklist prepared:
June 2, 2009. **Revised** June 22, 2009

7. Do you have any plans for future additions….
Development of a Hatchery ~~2020~~ Action Implementation Plan will form the basis of the hatchery reform implementation plan and associated schedule as referenced in Policy Guidelines #2 and #4. It is currently under development by geographic regions in the state, but it incomplete at this time. Upon completion, by region e.g. Puget Sound, Washington Coast, the Hatchery Action Implementation Plan will move through the SEPA process. In addition, the mark selective fishery plan and associated implementation schedule (policy guideline #10) may also require SEPA.

8. List any environmental information you know about that has been prepared….

~~Does not apply~~ A series of hatchery facility infrastructure reports were prepared by Bogden Engineering following the completion of the Hatchery Scientific Review Process in Puget Sound and Coastal Washington in 2004. In addition, reports developed by the Hatchery Scientific Review Group (HSRG) also include some environment information relative to the policy guidelines provided. For more information see: http://www.hatcheryreform.us/mfs/about/hsrg_show.action.

10. List any government approvals or permits that will be needed for your proposal, if known. ~~Does not apply~~

A variety of both federal and state permits may be required to complete implementation, but given the overarching nature of the current DRAFT policy guideline under consideration in this checklist, it is too early to determine what permits will be required where to describe in any detail.

11. Give brief, complete description of your proposal….

A Commission policy on hatchery and fishery reform will provide guidance and support for the Department's implementation of Hatchery Scientific Review Group recommendations by clearly stating the Commission's commitment to long-term hatchery and sustainable fishery strategies. Hatchery and harvest reform are critical to sustaining healthy fisheries and the future of fishing in the state of Washington. Recognizing that as the policy is implemented there may be work products, such as that associated with policy guideline numbers 2 and 4 that would describe in more detail potential environmental impacts, government approvals and/or permits, as well as more descriptive effects related to activities or actions under consideration for full implementation, the Washington Department of Fish and Wildlife will initiate SEPA. See attached DRAFT policy for italicized notes reflecting this clarification.

Hatchery reform has been an ongoing initiative in Puget Sound and Coastal Washington state for several years. Hatchery Reform was initiated in the Columbia River in 2007. The Department has embraced hatchery reform as a means to achieving salmon recovery while maintaining economically important harvest opportunities. The Department believes that hatchery production at levels similar to today can be maintained at most facilities and at the same time provides protection for wild fish and the recovery of wild stocks. If properly-managed, hatcheries can provide significant benefits to the citizens of Washington. If managed improperly, they can confound efforts to rebuild wild salmon populations and undermine efforts to recover wild fish.

12. Location of the proposal…

Though the policy would be effective statewide, the scope or range for implementation will be done by geographic regions such as Puget Sound, Washington Coast, Lower Columbia River, Middle Columbia River, Upper Columbia River and Snake River that match or are similar to the federal ESA salmon recovery regions. More specific details about sites or locations are not relevant yet, but as more defined information is developed associated with some of the identified work products within the DRAFT, additional SEPA would be initiated.

Proponent/Applicant:

Heather Bartlett
Salmon and Steelhead Division Manager
Washington Department of Fish and Wildlife

600 Capital Way N.
Olympia, WA 98501

Location of Proposal, including street, if any: Statewide, Washington- the policy would be effective statewide, the scope or range for implementation will be done by geographic regions such as Puget Sound, Washington Coast, Lower Columbia River, Middle Columbia River, Upper Columbia River and Snake River that match or are similar to the federal ESA salmon recovery regions. More specific details about sites or locations are not relevant yet, but as more defined information is developed associated with some of the identified work products within the DRAFT, additional SEPA would be initiated.

Lead Agency: Washington Department of Fish and Wildlife
WDFW has determined that this proposal will likely not have a significant adverse impact on the environment. Therefore, state law[1] does not require an environmental impact statement (EIS). WDFW made this determination of nonsignificance (DNS) after we reviewed the environmental checklist and other information on file with us..

There is no comment period for the Revised DNS.

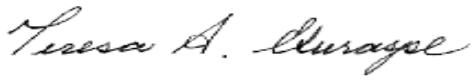
Responsible Official: Teresa A. Eturaspe

Position/Title: SEPA/NEPA Coordinator, Regulatory Services Section

Address: 600 Capitol Way North, Olympia, WA 98501

If you have questions about this action, please contact:

Teresa A. Eturaspe **Phone:** (360) 902-2575 **Fax:** (360) 902-2946 or
email: sepadesk2@dfw.wa.gov

DATE OF ISSUE: June 23, 2009 **SIGNATURE:** 

Footnotes

1. RCW 43.21C.030(2)(c)

SEPA Log Number: 09 -054rev. dns (also see 09-046)

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Mailing Address: 600 Capitol Way N - Olympia, Washington 98501-1091 - (360) 902-2200, TDD (360) 902-2207
Main Office location: Natural Resources Building - 1111 Washington Street SE - Olympia, WA

NOTICE OF FINAL DETERMINATION
PROPOSED HATCHERY AND FISHERY REFORM POLICY
DATE ISSUED-June 3, 2009, Revised June 23, 2009 DATE FINAL-June 23, 2009
SEPA NUMBER #09-054rev.

Under the State Environmental Policy Act (SEPA) and WAC 197-11-340(2), the Washington Department of Fish and Wildlife's (WDFW) issued a

[ ] Determination of Nonsignificance (DNS)

[ ] Mitigated Determination of Nonsignificance (MDNS)

[X] Revised Determination of Nonsignificance (RDNS)

This threshold determination is hereby:

[X] Retained

[ ] Withdrawn. WDFW is considering making substantial changes to the proposal based upon an evaluation of new information that was brought to our attention during the comment period. A new threshold determination will be made upon completion of the proposal revision.

[ ] Extended. A final threshold determination has not been made. This SEPA proposal is under additional review. You will be notified when a final determination is made.

Any comments received for this proposal are attached. Comments received may affect future permits required for this proposal. Please review all comments and respond accordingly.

This document is a part of the official SEPA record; retain this with your original checklist and determination.

Sincerely,

Teresa A. Eturaspe

Teresa A. Eturaspe
SEPA/ NEPA Coordinator

TAE:tae

cc: Regions 1,2,3,4,5,6,

Attachment 2

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

I. Name of proposed project, if applicable:
Hatchery and Fishery Reform Policy for Washington Department of fish and Wildlife Commission (FWC)

2. Name of applicant:
Washington Department of fish and Wildlife
3. Address and phone number of applicant and contact person:

Heather Bartlett

Salmon and Steelhead Division Manager

Washington Department of fish and Wildlife

600 Capital Way N.

Olympia, WA 98501

360-902-2662

4. Date checklist prepared:
June 2, 2009. Revised June 22, 2009
5. Agency requesting checklist:
Washington Department of fish and Wildlife
6. Proposed timing or schedule (including phasing, if applicable):·

FWC will receive Commission public testimony during their June 5-6 2009 meeting held at the Natural Resource Bldg. in Olympia

The FWC will look to adopt the Hatchery and Fishery Reform policy during their July 10-11 2009 meeting also held in Olympia

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Development of a Hatchery Action Implementation Plan will form the basis of the hatchery reform implementation plan and associated schedule as referenced in Policy Guidelines #2 and #4. It is currently under development by geographic regions in the state, but it incomplete at this time. Upon completion, by region e.g. Puget Sound, Washington Coast, the Hatchery Action Implementation Plan will move through the SEPA process. In addition, the mark selective fishery plan and associated implementation schedule (policy guideline #10) may also require SEPA.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
A series of hatchery facility infrastructure reports were prepared by Bogden Engineering following the completion of the Hatchery Scientific Review Process in Puget Sound and Coastal Washington in 2004. In addition, reports developed by the Hatchery Scientific Review Group (HSRG) also include some environment information relative to the policy guidelines provided. For more information see http://www.hatcheryreform.us/mfs/about/hsrg_show.action.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Does not apply.

10. List any government approvals or permits that will be needed for your proposal, if known.
A variety of both federal and state permits may be required to complete implementation, but given the overarching nature of the current DRAFT policy guideline under consideration in this checklist, it is too early to determine what permits will be required where to describe in any detail. .

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

A Commission policy on hatchery and fishery reform will provide guidance and support for the Department's implementation of Hatchery Scientific Review Group recommendations by clearly stating the Commission's commitment to long-term hatchery and sustainable fishery strategies. Hatchery and harvest reform are critical to sustaining healthy fisheries and the future of fishing in the state of Washington. Recognizing that as the policy is implemented there may be work products, such as that associated with policy guideline numbers 2 and 4 that would describe in more detail potential environmental impacts, government approvals and/or permits, as well as more descriptive effects related to activities or actions under consideration for full implementation, the Washington Department of Fish and Wildlife will initiate SEPA. See attached DRAFT policy for italicized notes reflecting this clarification. ,
Hatchery reform has been an ongoing initiative in Puget Sound and Coastal Washington state for several years. Hatchery Reform was initiated in the Columbia River in 2007. The Department has embraced hatchery reform as a means to achieving salmon recovery while maintaining economically important harvest opportunities. The Department believes that hatchery production at levels similar to today can be maintained at most facilities and at the same time provides protection for wild fish and the recovery of wild stocks. If properly-managed, hatcheries can provide significant benefits to the citizens of Washington. If managed improperly, they can confound efforts to rebuild wild salmon populations and undermine efforts to recover wild fish.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While

you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Though the policy would be effective statewide, the scope or range for implementation will be done by geographic regions such as Puget Sound, Washington Coast, Lower Columbia River, Middle Columbia River, Upper Columbia River and Snake River that match or are similar to the federal ESA salmon recovery regions. More specific details about sites or locations are not relevant yet, but as more defined information is developed associated with some of the identified work products within the DRAFT, additional SEPA would be initiated.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . . .

Does not apply. Not site specific.

b. What is the steepest slope on the site (approximate percent slope)?

Does not apply.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Does not apply.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Does not apply.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Does not apply.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Does not apply.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Does not apply.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Does not apply.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Does not apply. Not site specific.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Does not apply.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Does not apply.

3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Does not apply. Not site specific.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Does not apply.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Does not apply.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Does not apply.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Does not apply.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Does not apply.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Does not apply.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Does not apply. Not site specific.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Does not apply.

4. **Plants**

a. Check or circle types of vegetation found on the site:

N/A___ deciduous tree: alder, maple, aspen, other
N/A___ evergreen tree: fir, cedar, pine, other
N/A___ shrubs
N/A___ grass
N/A___ pasture
N/A___ crop or grain
N/A___ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
N/A___ water plants: water lily, eelgrass, milfoil, other
N/A___ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Does not apply.

c. List threatened or endangered species known to be on or near the site.

Does not apply.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Does not apply.

5. **Animals**

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: N/A
mammals: deer, bear, elk, beaver, other: N/A
fish: bass, salmon, trout, herring, shellfish, other: N/A

b. List any threatened or endangered species known to be on or near the site. Does not apply.

c. Is the site part of a migration route? If so, explain.

Does not apply. Not site specific.

d. Proposed measures to preserve or enhance wildlife, if any:

Does not apply.

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Does not apply.

1) Describe special emergency services that might be required.

Does not apply.

2) Proposed measures to reduce or control environmental health hazards, if any:

Does not apply.

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Does not apply.

3) Proposed measures to reduce or control noise impacts, if any:
Does not apply.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties?

Does not apply.

b. Has the site been used for agriculture? If so, describe.

Does not apply.

c. Describe any structures on the site.

Does not apply.

d. Will any structures be demolished? If so, what?

Does not apply.

e. What is the current zoning classification of the site?
Does not apply.

f. What is the current comprehensive plan designation of the site?
Does not apply.

g. If applicable, what is the current shoreline master program designation of the site?
Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
Does not apply. Not site specific.

i. Approximately how many people would reside or work in the completed project?
Does not apply. Not site specific.

j. Approximately how many people would the completed project displace?
Does not apply. Not site specific.

k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply. Not site specific.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Not applicable.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply. Not site specific.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply. Not site specific.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply. Not site specific.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Does not apply. Not site specific.

b. What views in the immediate vicinity would be altered or obstructed?

Does not apply. Not site specific.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Does not apply. Not site specific.

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Does not apply. Not site specific.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply. Not site specific.

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply. Not site specific.

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply. Not site specific.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Does not apply. Not site specific.

b. Would the proposed project displace any existing recreational uses? If so, describe.

Does not apply. Not site specific.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Does not apply. Not site specific.

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Does not apply. Not site specific.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Does not apply. Not site specific.

c. Proposed measures to reduce or control impacts, if any:

Does not apply. Not site specific.

14. **Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Does not apply. Not site specific.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Does not apply. Not site specific.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply. Not site specific.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Does not apply. Not site specific.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Does not apply. Not site specific.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Does not apply. Not site specific.

g. Proposed measures to reduce or control transportation impacts, if any:

Does not apply. Not site specific.

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Does not apply. Not site specific.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Does not apply. Not site specific.

16. **Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

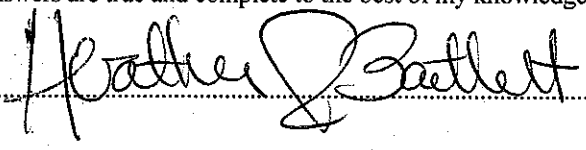
Does not apply. Not site specific.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Does not apply. Not site specific.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Date Submitted: June 22, 2009

TO BE COMPLETED BY APPLICANT

EVALUATION FOR
AGENCY USE ONLY

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Would not affect any of these elements.

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The policy upon full implementation will likely reduce negative impacts of hatchery salmonids on wild fish, as well as increase conservation measures and enhancing protection of wild fish during salmon and steelhead fisheries. Would not affect plants, animals nor other marine life.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Reduce hatchery production of salmon and steelhead and implement mark selective fisheries that focus harvest on more abundance hatchery fish than current.

3. How would the proposal be likely to deplete energy or natural resources?

Would not affect any of these elements.

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Would not affect any of these elements.

Proposed measures to protect such resources or to avoid or reduce impacts are:

TO BE COMPLETED BY APPLICANT

EVALUATION FOR
AGENCY USE ONLY

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   Would not affect any of these elements.

   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Would not affect any of these elements.

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

   Policy unlikely to be in conflict with any local, state, or federal law in place to protect the environment.

Attachment 3

SNOQUALMIE TRIBE

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Fax: 425-888-6727
E-Mail: Snoqualmie1855@snoqualmienation.com

Via E-mail

June 15, 2009

Teresa A. Eturaspe
SEPA/NEPA Coordinator
WDFW Regulatory Services Section
600 Capitol Way North
Olympia, WA 98501-1091
E-mail: SEPAdesk2@dfw.wa.gov

Re: Snoqualmie Tribe's Comments on Proposed Hatchery & Fishery Reform Policy

Ms. Eturaspe,

The Snoqualmie Indian Tribe submits the following comments on the Washington Department of Fish & Wildlife's (WDFW) Proposed Hatchery & Fishery Reform Policy. We are extremely supportive of WDFW's desire to develop a policy concerning long-term hatchery and sustainable fishery strategies. We concur with your statement that hatchery and harvest reform are critical to ensure a sustainable fishery in Washington state. Given the current state of our wild fish populations (especially in the Tribe's traditional areas), something has to be done to get us on a track towards sustainability. That being said, we have some concerns with how you are characterizing the policy for purposes of SEPA review.

Under SEPA, if the responsible official determines there will be no probable significant adverse environmental impacts from a proposal, the lead agency shall prepare and issue a DNS. WAC 197-11-340. The WDFW made this determination and issued the DNS on June 3, 2009. The Tribe feels that this determination was in error because the proposal may have significant adverse environmental impacts that should be analyzed, not ignored, in the SEPA process.

The fundamental problem with the WDFW's SEPA determination is due to your mischaracterization of the proposal as merely a "policy" to "provide guidance and support" to the hatchery and fishery reform effort. Upon closer scrutiny of what your proposal actually entails, it looks as if the proposal will involve the implementation of certain actions that may have an adverse environmental impact that should be considered through the SEPA process.

Under WAC 197-11-060(3)(iii), "proposals should be described in ways that encourage considering and comparing alternatives. Agencies are encouraged to describe public or nonproject proposals in terms of objectives rather than preferred solutions." Here, the agency has clearly identified its preferred solution as the proposal: "the Department believes that hatchery production at levels similar to today can be maintained at most facilities and at the same time provides protection for wild fish and

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the recovery of wild stocks." This shows that the WDFW has gone one step further than proposing a mere policy to reform hatchery operations to achieve a sustainable fishery. The proposal should be to achieve a sustainable fishery and reforming hatchery operations; not a description of one alternative as to how to achieve that laudable goal.

Moreover, many of the policy guidelines call for on-the-ground action that will undoubtedly have an impact on wild fish. It is these impacts that must be analyzed in the SEPA process. For example, policy guideline (4) calls for the development of an action plan that implements hatchery reform. Will these action plans be subject to individualized environmental review? If so, at what stage? Policy guideline (6) is an action that the Tribe undoubtedly supports, but it is an action the environmental effects of which should be analyzed in the SEPA process. Similarly, policy guideline (8) has the potential to have a huge impact on wild fish. If this requirement becomes "policy," how will its environmental impacts be adequately assessed?

By submitting these comments, the Tribe is in no way disputing the recommendations of the Hatchery Scientific Review Group, nor is it suggesting that the recommendations be ignored. The Tribe fully supports the notion that hatchery and fishery management be based on sound science. The reason for these comments is that implementation of these recommendations will have an on-the-ground impact on wild fish, and it is that impact that must be analyzed through the SEPA process so that the public can have an opportunity to comment on the proposed actions.

It also appears that the WDFW failed to accurately complete the environmental checklist in accordance with WAC 197-11-960. For example, question (8). Wouldn't the Hatchery Scientific Review Group's recommendations qualify as environmental information that directly relates to the proposal? Question (10): I imagine several government approvals and/or permits would be required to implement some of the activities discussed in the policy guidelines (e.g. policy guideline (5)). Even though the policy may not be site-specific, the WDFW should describe the potential environmental impacts associated with implementing the activities outlined in the policy guidelines.

Thank you for providing the Tribe the opportunity to comment on this proposal. We support the WDFW's efforts in hatchery and fishery reform, but urge the department to be more precise in its description of the actual actions that will be implemented as part of the policy, so that their environmental effects can be more fully analyzed. If you have any questions, I can be reached at (425) 888-6551 ext. 112.

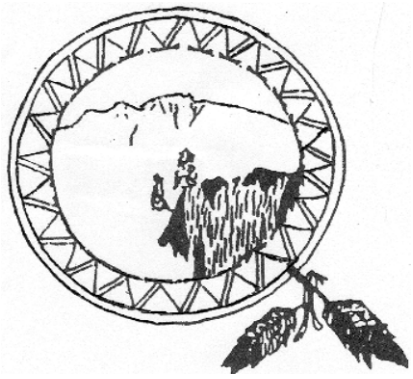
Sincerely,

/s Andrea K. Rodgers Harris

Andrea K. Rodgers Harris
In-House Legal Counsel

/s Matthew Baerwalde

Matthew Baerwalde
Envtl. & Natural Resources Dept.



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Attachment 4

THE TULALIP TRIBES

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The Tulalip Tribes are the successors in interest to the Snohomish, Snoqualmie, and Skykomish tribes and other tribes and band signatory to the Treaty of Point Elliott

June 17, 2009

Teresa A. Eturaspe
SEPA/NEPA Coordinator
WDFW Regulatory Services Section
600 Capitol Way North
Olympia, WA 98501

Dear Ms. Eturaspe:

The Tulalip Tribes received notice that the Washington Fish and Wildlife Commission (WFWC) has developed a proposed Hatchery and Fishery Reform Policy and has published this proposed policy for SEPA comment. Although we support and practice improved management of hatcheries we do have some objections regarding both the substance of the policy and the process by which it was developed.

With regard to the process, notifying the Treaty Tribes of a new hatchery reform policy through a general public SEPA notice is not sufficient. WFWC consultation with co-managing Treaty Tribes should occur prior to publication and notice to the general public. We request that the WFWC engage and collaborate with the Tulalip Tribes directly in the development of this policy document, which impacts the Tribes' Treaty rights. It is ironic that the first guideline in the proposed policy is working with the Tribes in implementing hatchery reform, but that WFWC appears to have bypassed the Tribes entirely in developing the hatchery reform policy itself. As a Treaty Tribe, the Tulalip Tribes' rights to co-manage the fisheries resource is well established through numerous orders in US. v. Washington, and such co-management rights specifically include hatchery fish. See U.S. v. Washington, 759 F.2d 1353, 1358-59 (9th Cir. 1985).

While we have a number of concerns with this policy, we do strongly support the improvement of hatchery programs and the work of the Hatchery Scientific Review Group (HSRG). The hatchery reform process, and specifically, the recommendations of the HSRG, have the potential to greatly improve and modernize hatchery operations throughout the Pacific Northwest. Over the past several years, in our Snohomish-Stillaguamish region, Tulalip has worked diligently with our comanager, the Washington Department of Fish and Wildlife, to put the HSRG's recommendations into effect. We believe that currently we are addressing each and every one.

With regard to the substance of this proposed policy, we have a number of comments, including those outlined below. The ostensible purpose of this SEPA action is to obtain a Determination of Nonsignificance in order to avoid the need to prepare an Environmental Impact Statement. Although we have no comment as to whether or not a formal EIS is necessary here, it is very clear to the Tulalip Tribes that some careful and thoughtful analysis of alternatives is required before adopting blanket policies such as "follow HSRG recommendations", "make all fisheries mark-selective", "externally mark all hatchery production", and the like. Our Tribe's long experience as a manager of the salmon resource, including the past few decades as a comanager with the State of Washington, has

taught us that this resource is complex and fragile and is not usually helped by "one size fits all" solutions. Many of the simple answers of the past have yielded fewer benefits and incurred more costs than originally believed. For example, large scale hatchery production was touted as the solution to allowing large scale environmental degradation without losing fisheries. We have come to find out that the promised fishery benefits have not materialized, while we continue to live with the broad consequences of the environmental degradation. It is clear to us that this policy of hatchery "reform" must be much better thought through than was the original move to large-scale hatchery production.

Some of the specific aspects of the proposed policy that cause concern include:

- The blanket call for a move to selective fisheries. Selective fisheries aren't well defined in the policy, although the policy implies a strong preference for mark-selective fisheries since it also calls for external marking of all hatchery production. But in many cases, time-area management has been shown to be much more effective in targeting hatchery fish and protecting wild fish. When many mixed-stock areas are opened for mark-selective fisheries, wild fish from many stocks are vulnerable to catch-and release mortality, sometimes incurring double, triple, or more, jeopardy through multiple encounters with gear. But under time/area management, those same areas would often be closed, allowing fish to return to terminal areas where they can sort themselves into stock groupings that can be harvested at appropriate rates. Mark-selective fisheries may be an effective tool to allow mixed stock fisheries where they otherwise wouldn't be possible. But they should be honestly portrayed as a way of allowing a certain kind of fishery, not as a pure conservation measure.

- The call for an increased "... focus on the harvest of abundant hatchery fish." This statement assumes that hatchery fish are infinitely abundant and always harvestable. However, hatchery fish are needed to perpetuate hatchery runs, often to supply more than one facility. Also, hatchery fish passing through preterminal areas are often needed for terminal area fisheries. So, like natural runs, each hatchery run has its own harvestable level and individual management needs. A blanket call for more harvest of hatchery fish ignores this complexity and might lead people to assume that all hatchery fish are always harvestable.

- The call for 100% external mass-marking of hatchery fish without a concurrent call for work to address some of the identified uncertainties associated with this. One important uncertainty concerns the compromising of the quality of data from the coded-wire tag database due to the presence of many unmarked and untagged salmon in mixed-stock areas. Any policy that calls for this kind of mass-marking must also call for the work necessary to develop and implement methods for obtaining stock composition data in mixed-stock fisheries in the face of many mass-marked fish. Another important uncertainty concerns the mortality rate of fish caught and released in mark-selective fisheries, which are an inevitable consequence of wide-scale mass-marking. These mortality rates are species-, time-, area-, and gear-dependent and are known to be highly variable. A policy that calls for mass-marking and selective fisheries should also call for continued research regarding the mortality rate of fish that are caught and released. Court orders and memoranda of understanding among the comanagers specify that mass-marking and selective fisheries should follow guidelines developed by the Pacific Salmon Commission's Selective Fisheries Evaluation Committee in order to guard against this type of uncertainty. We were surprised to find no mention of this in the draft policy.

- The call for a plan for "full implementation" of mark-selective fisheries. This assumes that we now know all we need to know about the nature, location, time, gear, seasons, etc., regarding which mark-selective fisheries are appropriate. However, this assumption flies in the face of what we know about fisheries management: the only constant is change and despite the criticisms we sometime hear, we managers usually get better at what we do over time. So, for example, suppose someone develops a new kind of fish wheel, or is successful at getting the old kind of fish wheel re-legalized by the State of Washington? Would a selective fishery using this gear be

prohibited because it was not in the "full implementation" selective fisheries plan? If so, that would preclude a fishery that could proceed with much less catch-and-release mortality than the current mark-selective fisheries. If not, and such a fishery could be part of the package, what's the point of having a "full implementation" selective fisheries package that could be modified so easily?

- The inclusion of the phrase "fishery reform" in the title. The proposed policy does not in any way comprehensively cover salmon fishery management. The use of the word "reform" implies that there has been something major wrong with fishery management to date. In fact, salmon fishery management is both intensive and comprehensive, it considers the cumulative effects of fishery actions on both the entire resource as well as on the individual components that comprise it, it includes frequent assessment of the resource as well as the effectiveness of management measures, and incorporates adaptive management as needed. None of the other activities that affect natural salmon production are managed as thoroughly or as well as fisheries. Furthermore, to the extent that fisheries management is in need of modification, this policy does not address it. The only fishery management measure addressed in this policy is a call for more mark-selective fisheries. Many other aspects of fisheries management that could be improved, such as improved stock assessment, catch reporting, stock composition sampling, enforcement, fisheries targeted at single stocks, etc., are ignored. There may well be a need for a WFWC policy regarding improved fishery management, but this is not it. And, of course, any new fishery management plan should be done within our current comanagement system; that is, with equal participation by the Tribes and the State of Washington.

- The policy refers to PNI values for integrated hatchery programs but ignores their basis in guidelines related to gene flow. Where we have estimates of gene flow, we should be using them, for both integrated and segregated programs. Simply endorsing the recommendations of the HSRG with the PNI guideline given seems to endorse removal of possibly large numbers of natural-origin fish from natural spawning areas if necessary to help meet PNI or gene flow guidelines in a hatchery program. Removal of wild fish from natural spawning areas, especially of ESA-listed fish, should only be done with strong and well thought-out justification.

  We are concerned that broad application of simple PNI guidelines might result in inappropriate removal of natural-origin fish from parts of a river system. In the Snohomish system, WDFW and Tulalip have guarded against this potential problem by agreeing that removals of natural-origin Chinook can only come from two specific places where habitat-based modeling shows that this is appropriate. Without similar detailed watershed-specific analysis, efforts to improve hatchery brood stocks might well directly counteract other efforts toward salmon recovery. The important point is that management decisions should be made specific to the situation in each watershed.

  In many areas, genetic data exist which can be used to calculate a much better estimate of gene flow between hatchery and natural segments of an integrated population or between segregated hatchery populations and the natural stocks they are intended to be segregated from. Where they exist, these data give a much more firm estimate of the impacts of hatchery fish on their target natural populations than using pHOS or PNI rules of thumb. In addition to estimating gene flow in terms of migrants per generation, genetic data can be used to estimate effective population size of hatchery and natural segments of populations which is the crucial figure for determining the effect of gene flow between populations of unequal effective size. Hatchery programs tend to have genetic variability reduced in proportion to the length of the program, both from genetic drift and inadvertent domestication, and are therefore less able to penetrate natural populations with higher effective genetic sizes, and also are more susceptible to introgression from planned integration efforts. Where these data exist they should be used, and where they have not yet been collected, they should be.

We are also concerned that broad application of pHOS and PNI guidelines may also result in the inappropriate removal of hatchery-origin fish from natural spawning areas as well. When we measure gene flow directly, we sometimes get a different result that requires less removal of hatchery fish from spawning areas than implied by the blanket PNI guidelines. For example, a recent examination of DNA composition of the two natural Chinook populations and the associated Wallace Hatchery population in the Snohomish basin has revealed that gene flow is much less than what was predicted using the All-H Analyzer (AHA) model, which uses the proportion of hatchery-origin spawners (pHOS) to estimate gene flow. In the Snohomish system, all natural Chinook salmon populations assayed for genetic variation have a ratio of effective population size to mean escapement (a standardization of effective population size estimates against the number of fish present) that is equal to or greater than the Wallace River Hatchery stock. This strongly suggests that fewer natural-origin fish would need to be taken into the hatchery to increase PNI, and that hatchery strays onto spawning grounds would have a diminished negative effect on PNI relative to natural-origin spawners.

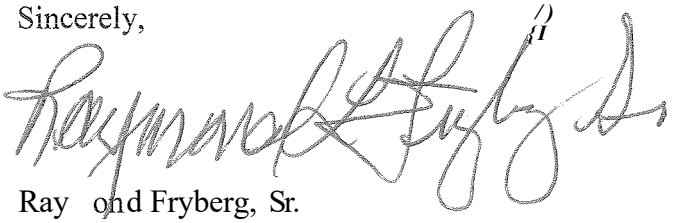
This result holds despite past pHOS rates that exceeded the recommended benchmarks in this draft policy while PNI rates fell short of the benchmarks in this Assessment, which could have been further exacerbated by the past use of non-integrated, non-native Green River Fall Chinook for hatchery propagation in this region. Recent data indicates that the Skykomish Chinook populations carry little of the signature of the non-native Green River Chinook stock that was propagated for many years in the Snohomish system. Meanwhile, current DNA data has shown that the native Skykomish summer Chinook currently used in regional hatchery programs is very similar genetically to the native Skykomish Chinook population it was founded from. This leads us to also strongly question whether this policy, which mandates pHOS and PNI benchmarks that, besides requiring the removal of natural-origin spawners to meet hatchery integration benchmarks, also requires the removal of hatchery-origin fish, regardless of their origin, the relative effective population size of the natural and hatchery populations involved, and/or measured gene flow. Our concern here is that this could also impede salmon recovery efforts if these properly operated hatchery programs that use native, integrated stocks, are actually making valuable contributions to recovering our native natural spawning populations.

- The policy ignores ecological interactions, the spread of disease, and the masking of the true status of wild populations, three of the principal hazards and risks of hatchery production that have been well documented. Yet, the Tribal and State managers of this resource have done a lot of work in all three of these areas, and the WFWC should include all of these in any comprehensive policy addressing hatchery production.

- Finally, and perhaps most importantly, although this policy mentions "all-H" management, it does not express a strong commitment to the habitat protection and habitat restoration that will be necessary to achieve State and Tribal goals for the salmon resource. In fact, functioning good quality habitat is necessary to support sustainable hatchery production as well as wild stocks, but that fact is not even mentioned in this policy. Any future we envision that includes a sustainable salmon resource must include a much more responsible approach to habitat management than we now see. In fact, if any of the "H's" requires "reform" in management, it is habitat.

Given the above, we would urge WDFW and the WFWC to revise this policy so that it will better reflect our mutual intent to manage the salmon resource for sustainability and abundance. We would also suggest that you seek a partnership with the Tribal managers in developing this policy. We are actively implementing hatchery reform recommendations in the Stillaguamish/Snohomish region as part of comprehensive salmon recovery, and we would like the WFWC policy to reflect more of the complexities and realities of doing this in the right way. If you have any questions regarding these comments, please contact Kit Rawson (360 716-4621; krawson@tulaliptribes-nsn.gov) or Mike Crewson (360 716-4626; mcrewson@tulaliptribes-nsn.gov).

Sincerely,



Ray ond Fryberg, Sr.
Director of Fisheries and Wildlife

Cc: Heather Bartlett – WDFW
Danny L. Simpson
Terry R. Williams
Kit Rawson
Mike Crewson

Attachment 5

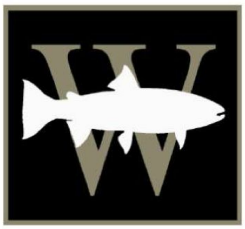
Eturaspe, Teresa A (DFW)

From: llh2747@yahoo.com
Sent: Thursday, June 18, 2009 8:46 PM
To: SEPADesk2 (DFW)
Subject: Re proposed DNS for Hatchery Reform Policy

I don't see how you can issue a DNS for this policy when the published evidence indicates that hatcheries THREATEN wild fish. (See the recent paper by Michael Blouin et.al. in Biology Letters)

Any continuation of hatchery operations represents a clear threat to listed species in the basins where the hatcheries are located. At best, you could issue a mitigated DNS with appropriate monitoring and mitigation of the water quality, competition and disease threats to wild fish associated with hatchery operation. Personally, I think a full EIS is required to show why hatcheries should continue in the face of all the evidence of the damage they do.

Laura Hudson
401 Monterey Way
Vancouver, WA 98661



Wild Fish Conservancy
NORTHWEST
SCIENCE EDUCATION ADVOCACY

October 12th, 2020
WDFW State Environmental Policy Act Comments
Post Office Box 43200
Olympia, WA 98504-3200
Delivered electronically to: commission@dfw.wa.gov, SEPAdesk2@dfw.wa.gov
Re: SEPA comments on draft Fish and Wildlife Commission Policy c-3619 (SEPA #20045)

Introduction

Thank you for taking comments on the Washington Department of Fish and Wildlife's (WDFW) Determination of Nonsignificance (DNS) under the State Environmental Policy Act (SEPA) for the draft changes to C-3619, the Anadromous Salmon and Steelhead Hatchery Policy (Hatchery Policy Revision), which would replace the C-3619 adopted in 2009, the Hatchery and Fishery Reform Policy (Original Hatchery Policy).

Given the fundamental significance of C-3619 for long-standing wild fish recovery efforts within the state of Washington and beyond, the Wild Fish Conservancy and The Conservation Angler are very concerned that the Hatchery Policy Revision abandons the Hatchery Science Reform Group's (HSRG) science-based guidance described in the Original Hatchery Policy, without justification, or exploration of the potential environmental consequences of this change. The Hatchery Policy Revision will have a statewide impact that will harm fish species listed under the Endangered Species Act (ESA) and undermine statewide recovery efforts. It is thus clear that the revision of C-3619 is likely to have significant adverse environmental impacts, and it must undergo full environmental review. The information provided by WDFW through this SEPA review is wholly inadequate to justify a DNS.

The DNS is based on incomplete, insufficient, and misleading environmental review, which fails to identify the well-documented environmental impacts associated with status-quo hatchery production, let alone the increased hatchery production this new policy appears intended to enable (See Attached Final SRKW-Enhancement Fish Production document). WDFW failed to properly identify and evaluate the direct, indirect, and cumulative environmental impacts of the actions likely to result from the Hatchery Policy Revision. These impacts include those resulting

from the deletion of several HSRG-endorsed conservation measures included in the original C-3619, such as a statewide commitment to Wild Salmonid Management Zones.

The ecological and genetic risks of abandoning HSRG guidance and thresholds are clearly articulated in “A Review of Hatchery Reform Science in Washington State” (2020) (2020 Study), a final report prepared by WDFW and independently reviewed by the Washington Academy of Natural Sciences. The 2020 Study was prepared at the request of the Fish and Wildlife Commission (FWC) and purportedly intended to guide the development of this new hatchery reform policy. However, WDFW has inexplicably ignored the findings of the 2020 Study in reaching its conclusion that the Hatchery Policy Revision would not have a significant environmental impact. The DNS is thus irreconcilable with WDFW’s own scientific conclusions, as expressed in the 2020 Study.

WDFW should withdraw the DNS, issue a Determination of Significance (DS), and prepare a comprehensive Environmental Impact Statement (EIS) to assess and analyze the full impacts of the Hatchery Policy Revision in compliance with SEPA, including a no action alternative. This EIS will also give WDFW the opportunity to remedy the SEPA violation committed in June 2018, when the FWC suspended Guidelines #1, #2, and #3 of the Original Hatchery Policy without any SEPA consideration or review. In order to prevent similar future SEPA violations as the Revised Hatchery Policy is adjusted, we recommend WDFW initiate a phased non-project SEPA review process, to ensure that information not currently provided by WDFW (i.e. the environmental impacts of specific hatchery programs) receive the proper SEPA review and subsequent EIS’s where required.

DNS Ignores Potential Widespread Harm to Wild Fish and Ecosystems, Including Endangered Southern Resident Killer Whales

1. Through SEPA, the state failed to conduct a robust and accurate analysis of the environmental impacts resulting from this policy, as well as the likely magnitude of those environmental impacts. These significant adverse environmental impacts include, but are not limited to, removing approximately 230 million fish eggs from the environment in the 2018-2019 spawning year and the associated environmental impacts resulting from the artificial propagation and release of those offspring thereafter. Over 60 hatchery facilities are in operation and release fish at over 200 locations throughout the state of Washington. The Hatchery Policy Revision removes without justification important environmental accountability requirements that exist in the Original Hatchery Policy, and paves the way for substantial increases in hatchery production beyond the science-based HSRG recommended guidelines and thresholds established in there. The risks extend not only to wild fish competing with or breeding with hatchery fish, but to the entire ecosystem that is reliant on healthy self-sustaining fish populations, ranging from but not limited to our forests and apex predators like endangered Southern Resident killer whales.

2. The regulatory agencies lack sufficient regulatory controls to allow the proposed action to go forward. WDFW is currently in a fiscal crisis, with budget shortfalls requiring substantial cutbacks in programs and services. Even prior to the 2020 budget crisis, WDFW concluded that its hatchery system focused on production efficiency and maximizing abundance instead of the widespread implementation of environmental risk reduction measures (WDFW 2020).

Statewide actions and associated environmental impacts guided by the Hatchery Policy Revision include, but are not limited to:

- Killing wild fish for broodstock, reducing the abundance of already-depressed wild fish populations.
- Rearing fish in hatcheries, with associated habitat, water quality, water quantity, and disease impacts on the environment.
- Releasing domesticated fish, with associated competition, disease, and predation impacts.
- Enabling adult hatchery fish to spawn in the wild, often in excess of science-based hatchery-origin spawner thresholds provided through the original c-3619, with associated well-documented genetic impacts on wild fish populations (Science Division Talks).
- Wild fish bycatch mortality occurring in nonselective fisheries enabled through hatchery production.
- The potential to amplify and spread exotic and endemic viruses and diseases.

These impacts are caused by status-quo hatchery programs that are violating the letter and intent of the existing C-3619 hatchery reform policy, which to our knowledge has never been reviewed through an EIS. Potential increases in hatchery production enabled under the Hatchery Policy Revision are likely to result in even greater environmental impacts.

DNS Ignores Findings in 2020 Report

Significant adverse environmental impacts from hatchery programs are well-documented in scientific literature (Hatchery Science Literature document, Study 2020) , but are not identified in WDFW's SEPA checklist or determination. As directed by the FWC through the C-3619 review process, WDFW and the Washington State Academy of Sciences conducted A Review of Hatchery Reform Science in Washington State (2020 Study). This thorough WDFW-produced and independently-reviewed report provides the following key and relevant conclusions which were not analyzed by WDFW during its threshold determination process, nor provided to the public through the SEPA process. These conclusions exemplify the potential for the revised C-3619 to have significant adverse environmental impacts that must be considered through an environmental impact statement:

1. The HSRG principles of reducing pHOS and increasing pNOB to achieve fitness gains in wild populations are well-founded, and should be fundamental goals in any hatchery reform management action. *[WFC: despite this, commitments to HSRG principles have been removed in the revised C-3619 without justification].*

2. Excessive hatchery program size requires more careful scrutiny and scientific justification because it affects virtually every aspect of hatchery risks to specific populations, and to the ecosystem as a whole. *[WFC: the revised C-3619 enables increases in hatchery production beyond science-based thresholds currently in place].*

3. Hatcheries have potential for large magnitude ecological impacts on natural populations that are not well understood, not typically evaluated and not measured.

4. Hatchery risks include fishery risks, ecological risks and genetic risks. Fisheries targeting abundant hatchery runs can unintentionally increase mortality of co-mingled natural populations. *[WFC: despite this, the revised C-3619 deleted the statewide commitment to develop, promote and implement alternative fishing gear to maximize catch of hatchery-origin fish with minimal mortality to native salmon and steelhead. While the revised policy states it is not intended to alter current harvest management policies to pursue and implement mark-selective fishing, we are aware of no policy that will promote selective fishing gears after the current C-3619 is replaced with the re-written C-3619].*

5. Research on ecological [HxW] interactions lags far behind the attention devoted to genetic risks of hatcheries. Importantly, research suggests the potential for ecological interactions in marine environments shared between multiple hatchery and natural populations, yet very little is known about the likelihood or magnitude of population scale ecological impacts of hatcheries.

6. Studies comparing the number of offspring produced by hatchery-origin fish and natural origin fish when both groups spawn in the wild (relative reproductive success, RRS) have demonstrated a general pattern of lower reproductive success of hatchery-origin fish.

7. In WDFW's hatchery system, a focus on efficiency and maximizing abundance prevents widespread implementation of risk reduction measures.

8. We recommend a more rigorous, consistent and intentional evaluation of cumulative hatchery effects across multiple hatchery programs operating within a geographic Region.

9. WDFW invests considerable effort into population monitoring, yet this information does not often achieve its potential as a hatchery evaluation tool because analysis, reporting, and synthesis are typically underfunded. Furthermore, for many hatchery programs, the absence of a clear framework for application of monitoring data in decision making precludes clearly articulated risk tolerance thresholds.

10. Hatchery Genetic Management Plans (HGMPs) and the NOAA Biological Opinions authorizing them are the primary regulatory documents guiding hatchery management. In most cases, they lack clearly articulated monitoring and evaluation plans for understanding and controlling hatchery risks. Quantifiable methods for measuring risk and numerical thresholds for either risk tolerance or program changes are relatively rare. As emphasized by the HSRG (2015), we suggest that stand-alone monitoring and evaluation plans, inclusive of risk assessment methods, risk tolerance thresholds and an adaptive management process, are essential components of scientifically defensible hatchery programs. *[WFC: despite this, within the revised C-3619 HGMPs appear to be the primary mechanism for directing operations and identifying conservation measures at individual hatchery facilities].*

11. Fish disease risks associated with enhancement hatchery programs include the potential for the: a) introduction of exotic pathogens, b) amplification of endemic pathogens, c) horizontal transmission between infected hatchery and their wild counterpart, d) introduction of pathogens at unusual times, e) alteration genetic factors contributing to disease resistance, f) introduction pollutants to natural systems via the effluent. Transmission of pathogens can occur between hatchery and wild fish in either direction. The increased rearing numbers of suitable fish hosts at hatchery production facilities can serve to amplify the number of pathogens shed into the environment (Moffitt et al. 2004). *[WFC: WDFW's SEPA checklist and determination neither acknowledged nor addressed the disease risk associated with their hatchery programs. For example, Purcell (2017) presents results from adult salmon sampled during hatchery spawning activities, acknowledging that piscine orthoreovirus (PRV) is widespread in WA salmon and steelhead. The established northeast Pacific PRV-1 variant was recently found to have derived from a single introduction from North Atlantic waters (Siah et. al. 2020)].*

Hatchery Policy Removes Key Environmental Protections

Provisions within the Original Hatchery Policy "to protect the environment from hatchery impacts" have been removed in the Hatchery Policy Revision with no justification, discussion, or analysis. These deletions are hidden from the public during the SEPA review process since neither the original policy C-3619 nor a crosswalk comparing the original policy and the rewrite were provided to the public. Conservation-intended hatchery and fishery reform commitments which have been deleted in the Hatchery Policy Revision without scientific rationale or justification include:

1. Eliminated WDFW's commitment to the science-based principles, standards, and recommendations of the HSRG to reduce the genetic and ecological impacts of hatchery fish and improve the fitness and viability of natural production. In the review performed at the request of the Commission, the WDFW and WA Academy of Sciences concluded

these principles are fundamental to effective hatchery reform management actions (WDFW 2020).

2. Whereas the current policy C-3619 is intended to promote and guide the implementation of hatchery and fishery reform for all state hatcheries (anadromous and resident fish hatcheries), the C-3619 rewrite is limited to those hatcheries producing anadromous salmon and steelhead. The state took eggs from over 31 million eggs from resident fish in 2018 (2018-2019 WDFW Final Hatchery Escapement Report), however under the revised C-3619, these programs are excluded from the hatchery reform policy.
3. Removed statewide commitment to Wild Salmonid Management Zones, an important HSRG recommendation.
4. Removed statewide commitment to develop, promote and implement alternative fishing gear to maximize catch of hatchery-origin fish with minimal mortality to native salmon and steelhead.
5. Removed statewide commitment to implement hatchery reform actions on a schedule that meets or exceeds the benchmarks identified in the 21st Century Salmon and Steelhead Framework.
6. Removed statewide commitment to develop watershed-specific H-integration action plans for meeting conservation goals at the watershed scale.

WDFW Failed to Provide and Analyze Key Information

Within the SEPA checklist and determination provided to the public, WDFW's effort to inform the public about the policy's likely environmental impacts was wholly inadequate, and opaque at best. To our knowledge, there was no public notification of the Hatchery Policy Revision SEPA comment period. WDFW obfuscated the policy's potential adverse environmental impacts by using the phrase "does not apply" or "not applicable" 86 times within the SEPA checklist provided to the public, rarely providing any additional explanation or justification. This response clearly contradicts the Hatchery Reform Science Review that the Commission requested be completed to inform the development of this policy. The checklist provided by WDFW to the public clearly represents a bad-faith effort by WDFW to confound the public's objective review of this significant policy. As stated in SEPA checklist instructions, applicants are expected to completely answer all questions that apply, and note that in the checklist Part B-Environmental Elements, words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The instructions state that applicants may use "not applicable" or "does not apply" only when they can explain why it does not apply and not when the answer is unknown.

In addition to the substantive deficiencies of the SEPA determination and materials provided by WDFW for the public's review, several procedural deficiencies prevent sufficient public SEPA review. These include but are not limited to failing to provide the public with the original C-3619 policy and prior SEPA documents from 2009; failing to provide the public with Appendices 1 and 2 referenced in the draft C-3619 rewrite; and failing to provide complete responses to public disclosure requests made by Wild Fish Conservancy in April, 2020 for pertinent information necessary for the public to provide comments and review. Furthermore, the agency violated

SEPA when the Fish and Wildlife Commission (FWC) suspended Guidelines #1, #2, and #3 of policy C-3619 in June, 2018 without conducting any SEPA analysis.

Neither the Original Hatchery Policy, nor a comparison between it and the proposed Hatchery Policy Revision, were provided as part of the SEPA review process. This omission obfuscates the significant changes and environmental impacts represented in the proposed policy, as described below.

We requested Original Hatchery Policy SEPA determination and supporting records from the SEPA coordinator on Sept. 23, but were told we would need to submit a PDR. As of **October 12th, 2020** we have not received the requested documents, or acknowledgement of the public disclosure request.

To better understand the rationale for the new 3619 policy, Wild Fish Conservancy submitted a Public Disclosure Request to WDFW on April 22, 2020. The specific and focused request was for “Any records created or received by the WA Fish and Wildlife Commission related to the C-3619 Hatchery Policy between March 1, 2020 and April 22, 2020. Please include related records created or received by any individual Commissioners as well as the Commission’s “Fish Committee.” The Department has been slow to respond to the request, undermining the public’s ability to assess the policy and the state’s proposed determination of non-significance. While the request was for records created over a 1.5 month period, over 5.5 months later we have yet to receive all the requested information. Regardless of the intent, the perception is certainly that of foot-dragging.

The lack of publicly available SEPA documents and associated determination for the existing policy contributes to a lack of transparency on how this current analysis fully evaluates the changes in environmental impacts. This is in stark contrast to other alarming documents, such as the Steelhead at Risk Report, that note severe threats with the species and ecosystems this policy concerns. Good policy making has strategic, measurable, achievable, relevant, and time-bound goals to ensure effectiveness. These components are lacking in the draft policy rewrite of 3619, complicating the public’s understanding of the environmental implications of the policy being reviewed.

Conclusion

The State’s proposed threshold Determination of NonSignificance (DNS) is based on an incomplete, deficient, and misleading environmental review and fails to address many well-documented environmental impacts associated with status-quo hatchery production, let alone the changes to hatchery production this new policy enables.

Within the SEPA checklist (A.8), WDFW indicates that terms and conditions to prevent hatchery production from impacting ESA-listed species may need to be developed through consultation with NOAA and the USFWS. It is incumbent on WDFW to describe the Hatchery Policy Revision’s conservation elements sufficiently enough to allow for meaningful environmental review and comment. Lacking this, it is impossible to fairly evaluate the environmental impact of

the proposal without performing a full EIS. The federal ESA, NEPA, and the state SEPA are separate obligations, and WDFW must comply with them all. A phased SEPA review would allow public input on the environmental impacts of specific hatchery programs on a case-by-case basis once WDFW and the federal agencies negotiate the promised conservation elements. A decision by WDFW to conduct a phased SEPA review will prevent similar SEPA violations under the policy, such as the FWC's suspension of Guidelines #1, #2, and #3 of policy C-3619 in June, 2018 that never received SEPA review and represents a current and ongoing SEPA violation.

As such, a full environmental impact statement as part of a phased non-project SEPA review is required to fully identify and analyze probable adverse environmental impacts, reasonable alternatives, and possible mitigation; and to comply with SEPA.

Respectfully submitted,

Kurt Beardslee, Executive Director
Wild Fish Conservancy
Kurt@wildfishconservancy.org; 206.310.9301

Pete Soverel, President
The Conservation Angler
16430 72nd Ave West
Edmonds, WA 98026
soverel@msn.com
425-742-4651 (office)

Cc. WA Fish and Wildlife Commission

March 22, 2021

Lisa Wood, SEPA/NEPA Coordinator
WDFW Habitat Program, Protection Division
P.O. Box 43200
Olympia, WA 98504

Re: SEPA Public Comments for Hatchery and Fishery Reform Policy (C-3624), WDFW

Fish and Wildlife Commissioners:

On behalf of the Wild Steelhead Coalition's Board of Directors and thousands of members, we are writing to again express our opposition to the Washington Fish and Wildlife Commission's Hatchery and Fishery Reform Policy (C-3624 and predecessor C-3619). It is clear that this process and its recommendations has prioritized political and disingenuous economic motivations at the expense of the ecological principles underpinning wild fish under the guise of orca recovery. By largely abandoning the recommendations of the 2009 Hatchery Scientific Review Group (HSRG), it sets out to establish a state hatchery policy built around convenience instead of rigorous scientific guidance.

We recognize that the draft policy spans all hatchery operations for Pacific salmon and steelhead. Our comments are directed specifically at steelhead, but we realize that the practices in place for the other salmon species will likely have influence on, and relevance to, steelhead. The emphasis on chinook with regard to endangered Southern Resident killer whale population is noted. To this, research has found that pinnipeds in an area of the Salish Sea consumed more salmon than killer whales and all fisheries combined. These same marine mammals are having a similar impact on steelhead populations. Ignoring this ecological fact and expecting hatchery introductions to resolve the situation is probably ill-advised until a better understanding of smolt migratory survival, especially for hatchery-origin out migrants. Not to mention the impact to the entire food web.

C-3624 is also woefully inadequate in its commitment to accountability and transparency of hatchery stock impacts on wild, native fish. The policy lacks commitments to the resources necessary to effectively monitor the effects of these expanded hatchery plants. It also fails to effectively offer metrics of success or measurable parameters of impact. These were required under the HSRG guidelines and these recommendations, or a similar governing body of research, should not be abandoned.

To this end, metrics such as smolt-to-adult ratio (SAR) and Proportionate Natural Influence (PNI) are well established and provisions should be included in the policy to provide routine opportunities to evaluate the impacts of the state's hatchery programs. Consequences must be established, and financial resources should be dedicated, to account for the programs' impacts so they can be eliminated or curtailed should they be found to be detrimental to wild, native fish recovery.

In conclusion, we believe Policy C-3624 is a continuation of expedient but unsound hatchery practices due to its lack of commitment to measurable outcomes and impacts. It simply repeats the mistakes of the past by ignoring the rigorous standards put in place by the HSRG.

Thank you for the opportunity to provide our comments.

Greg Topf
Board Chair, Wild Steelhead Coalition

Guy Fleischer
Science Advisor, Wild Steelhead Coalition

To:Lisa Wood, SEPA/NEPA Coordinator, WDFW Habitat Program, Protection Division

From: J Michelle Swope
Washington Coordinator, Native Fish Society

Re: Native Fish Society comments on DNS 21-008: ANADROMOUS SALMON AND STEELHEAD HATCHERY POLICY C-3624 SUPERSEDES POLICY C-3619

Dear Lisa Wood,

Thank you for the opportunity to provide comments on the DNS 21-008: ANADROMOUS SALMON AND STEELHEAD HATCHERY POLICY C-3624 SUPERSEDES POLICY C-3619. The Native Fish Society (NFS) is a 501(c)3 conservation non-profit, dedicated to utilizing the best available science to advocate for the protection and recovery of wild, native fish and promote the stewardship of the habitats that sustain them. NFS has _ *3,300* _ members and supporters and _90_ River Stewards and grassroots advocates who help safeguard fish across the Pacific Northwest. In Washington State, we have 26 locally based River Stewards covering the Puget Sound, Columbia and Coastal watersheds.

Despite a century and a half of use, fish hatcheries (hereafter referred to as fish factories) remain an unproven method to sustain the viability and biodiversity of native fish populations, preserve the culture of commercial and recreational fishing, and uphold treaty obligations and subsistence fishing for indigenous peoples and sovereign nations. There is an overwhelming scientific consensus that fish factories have a myriad of direct negative consequences for fish including **infrastructural**, **ecological,** and **genetic** impacts, although these categories interact considerably. There is also a growing public awareness of the **indirect** impacts fish factories cause within the socio-ecological interface within watersheds and socio-economic dimensions of fisheries. The aesthetic and emotional state of communities who are impacted by factory fish and the ways in which fish factories detract from the protection of the natural environment also threaten the recovery and protection of wild fish throughout the Pacific Northwest.

In the Washington State, there are native fish species that are listed as threatened on the Endangered Species Act, and appear on the WDFW State Listed Species document, revised in February of 2020. Chinook Salmon Snake River Fall FT Snake River Spring/Summer FT Puget Sound FT Upper Columbia Spring FE Lower Columbia FT Chum Salmon Hood Canal Summer FT (includes Strait of Juan de Fuca, not Puget Sound) Columbia River FT Sockeye Salmon Snake River FE Ozette Lake FT Steelhead Snake River FT Upper Columbia FT Middle Columbia FT Lower Columbia FT Bull Trout FT NOT STATE CANDIDATES Fish stocks that have been the subjects of federal register notices, but have not yet been added to the state candidate list. Coho Salmon Puget Sound/Strait of Georgia - Lower Columbia FT Steelhead, Puget Sound DPS FT Green Sturgeon FT These are the Chinook, Chum, Sockeye and Steelhead.

The viability of these fish populations is considered in some cases endangered, and in others, declining, as determined in the most recent status review, the https://wdfw.wa.gov/sites/default/files/2020-02/statelistedcandidatespecies_02272020.pdf Regardless of this

trend, fish factories in Washington State watersheds continue to rear Steelhead and Salmon, in spite of the numerous, documented, negative consequences resulting from these programs.

The negative impacts resulting from fish factories can occur within facilities at the species level, on the natural environment within and beyond the fish factory, and to ecosystems far beyond where those factory fish are reared and released. The negative effects of factory fish are severe enough that courts have recognized "stray [factory] fish as low as one or two percent...may pose unacceptable risks to natural populations"[1].

In light of the condition of our Steelhead and Salmon, and the continued impacts fish factories cause, we request that the WDFW certifies they are following all applicable environmental laws when taking action, including, but not limited to the:

- Endangered Species Act,
- National Environmental Policy Act,
- Administrative Procedure Act,
- Clean Water Act

Within these policies there is a clear standard to incorporate the best available science and to consider cumulative impacts, socioeconomic, and environmental justice concerns. In light of the following considerations we recommend the WDFW adopt a Hatchery policy that sunsets failing hatcheries, designates more waters as Gene Bank rivers for wild Salmon and Steelhead, and halts broodstock programs that have proven to harm, instead of bolster, wild runs of native fish.

In these comments we detail five main impact/risk categories that have been previously recognized, studied, and reviewed. Within each of these five areas, we also detail subcategories and cite specific examples of how those impacts have contributed to increased extinction risk for fish and to impacts on the people who depend heavily on these species.

1. Infrastructural impacts

Infrastructural impacts arise from the captive rearing of fish in a factory setting including the (a.) *physical location of the facility*, (b.) *operation and resource consumption of the facility*, (c.) *potential for general facility failure,* and (d.) *demographic and collection impacts*.

> (a.) Often fish factories are located in or adjacent to important floodplain habitat, causing ongoing impacts to fluvial geomorphological processes including preventing active channel migration. Many fish factories also rely upon weirs, traps, or other infrastructure within the stream channel that negatively impacts downstream habitats, impedes aquatic organism migration and negatively effects spawning and rearing behavior.

[1] Native Fish Soc'y, 992 F. Supp. 2d at 1104 (quoting the administrative record) (internal citations omitted).

(b.) In order to rear fish, factories withdraw water from the stream channel or local groundwater sources to use in the facility. Factors such as flow reductions, displacing other stream-dwelling organisms crucial to the aquatic food web, and dewatering the spawning and rearing areas can all occur from extracting water from the environment surrounding the artificial propagation infrastructure. If water is returned to the stream, effluent discharges consisting of modified water temperature, pH, suspended solids, ammonia, organic nitrogen, total phosphorus, and chemical oxygen demand in the receiving stream's mixing zone can all negatively affect the fish (Kendra 1991). It is also possible for bacteria, parasites, and viruses to be introduced through this effluent discharge. Fish factory operations are required to comply with the Clean Water Act, and specifically be covered under a National Pollutant Discharge Elimination permit. The Clean Water Act accomplishes this regulation by requiring a permit for each and every point source discharge, with effluent limits based on the more stringent of technology-based standards and standards necessary to protect water quality and existing water uses. If hatcheries are permitted with an NPDES, their permits are often administratively continued and no longer reflect current federal and state water quality standards as the Clean Water Act requires. Often, it is not known how a fish factory impacts water quality, and often the magnitude of impacts depend upon the flow volume of the hatchery effluent relative to the total flow of the stream. In some circumstances, relatively small amounts of toxic discharges from fish factory effluent can cause significant harm stemming from residual chemical reagents, salts, and chlorinated water[2]. If permits do reflect current standards, data is not presented to verify the claim that "303(d) listings are not affected in any way by the operation of the [factory] programs" (DEIS Page 30). These water quality permits are intended to protect aquatic life and public health and ensure that all artificial propagation facilities adequately treat their wastewater. Regardless of the cause of water quality impairments, fish factories may not exacerbate water quality problems in impaired watersheds.

(c.) Time and again, fish factories have been subject of artificial propagation failures that cause massive die offs in captive populations. Risks exist in water intake screens becoming plugged, the facility losing electrical power, or catastrophic loss of fish through environmental disaster such as fire, debris torrent, and flooding. Additionally, poor artificial propagation and facility maintenance is a common reason fish are unintentionally killed in fish factories.

(d.) Injury can be caused to fish populations through the collection of fish for artificial propagation in the hatchery. Usually this impact is imposed on adult fish returning to the stream to spawn, but these impacts can also be imposed through the collection of eggs, emerging fry, and juvenile fish. By taking fish into captivity the phenology of their upstream migration and subsequent life history is disrupted. This disruption in timing occurs primarily through the use of weirs, fish traps, and seines, which contribute to wild fish falling back into less preferable spawning and rearing areas, and fish becoming injured while trying to jump barriers within and mandated by the artificial propagation facility. (Hevlin and Rainey 1993, Spence *et al.* 1996). Risk is also posed to wild fish by the need to continually extract natural-origin individuals from the population to counteract domestication effects caused by the fish factory. This removal of individuals from the population removes nutrients from upstream reaches (Kapusinski 1997) and contributes to the

[2] Center for Environmental Law and Policy; and Wild Fish Conservancy Case 2:15-cv-00264-SMJ

decline in abundance, productivity, diversity, and spatial distribution of the threatened and endangered populations.

Infrastructural impacts are often assumed to be offset through investments in equipment or changes in artificial propagation procedures. However, the physical existence of the factory represents a permanent, negative impact on the surrounding environment and can also pose serious harm to fish populations both in and outside of the facility. In addition, the cost it takes to offset these impacts into the indefinite future is always greater than the cost of restoring watershed function and further delays investment in the root causes of decline for natural fish.

2. **Ecological Impacts**

Ecological impacts occur on an inter and intraspecies basis both inside and outside the artificial production facility. Ecological interactions occur whether or not inter-breeding occurs and are magnified if resident life histories are being produced. Ecological impacts include: a.) disease, b.) competition, c.) behavioral modification, and d.) marine derived nutrients. Review papers by Pearsons (2008) and Kostow (2009) document numerous, serious, negative ecological consequences as a direct result of the artificial propagation of fish.

(a.) *Disease:* Common diseases within hatcheries of the Northwest include Furunculosis (*Aeromonas salmonicida), Saprolegnia spp.,* Cold Water Disease *(Flavobacterium psychrophilum), Trichodinids,* bacterial kidney disease (*Renibacterium salmoninarum),* among others. Bartholomew *et al.,* 2013 is often cited as a source claiming hatcheries do not pose a risk to surrounding watersheds from artificially amplifying pathogens and parasites. However, through regular monitoring conducted by state and federal agencies, we know that disease is a constant problem when artificially rearing fish in high densities (Saunders 1991). Rearing facilities expose captive fish to increased risk of carrying pathogens because of the increased stresses associated with simplified and crowded environments. It is probable that fish transferred between facilities, adult fish carcasses being outplanted into the watershed, and other fish released from factories, have acted as a disease vectors to wild fish and other aquatic organisms. These diseases, amplified within the factory, contribute to the mortality of fish at all life stages and can travel rapidly to areas well beyond where effluent pipes are discharged. The outplanting of juvenile and adult fish can transfer disease upstream of the rearing site, and there is the potential for lateral infection through the travel of avian, mammalian, and other terrestrial predators which overlap with the distribution of artificially propagated fish.

The release of artificially produced factory fish into the wild also poses a risk of introducing pathogens and parasites to wild populations that can result in temporary epidemics or permanent reductions in wild populations. While this risk is more difficult to quantify than genetic and competitive effects, they are unlikely to be negligible. Even an individual fish released from a pathogen-laden factory environment can transfer the infection to areas where wild fish are susceptible, leading to devastating consequences. This is especially of concern with regard to local wild populations, including the majority of threatened fish populations, that are already at depressed levels of abundance. These dynamics contribute to disease driven mortality at all life stages in wild fish populations.

b.) *Competition:* In watersheds which have a diminished fish population, competition for resources limits the abundance, productivity, diversity, and spatial distribution of wild fish populations. Competition occurs when the demand for a resource for two or more organisms exceeds that which is available. Negative impacts result from direct interactions (i.e. interference of wild fish foraging by artificially propagated fish) and through indirect means (i.e. factory fish diminish the availability of aquatic insects available as forage to wild fish). Direct and indirect impacts may arise through competition for: food resources within the stream, juvenile rearing habitat, food resources within the estuary and ocean (Levin et al. 2001) and competition for spawning sites (Buhle *et al.* 2009). These impacts are especially significant between steelhead, chinook, and coho (on an interspecific and intraspecific basis) because of the considerable overlap in habitat and foraging preferences between these species (SWIG 1984). Of great concern are the competitive ecological interactions where wild fish are displaced by artificially propagated and reared fish introduced into the same habitat.

c.) *Behavioral Modification:*

(1) *Predation by other fish & wildlife:* Fish produced in factories also bear maladaptive behaviors due to the strong selection within the artificial production facility. Due to the food distribution and rearing strategies necessary to make artificial production cost effective, factory fish become hyper-aggressive and surface oriented, causing them to become more susceptible to predators (Hillman and Mullan 1989). Artificially produced fish also exhibit less diversity in their behaviors and life histories, allowing for predators to key in on migration timing. Especially during *en masse* factory smolt releases, wild fish can be preyed upon by pinniped, avian, and other piscivorous predators attracted to the high number of factory fish concentrated in a given area. The modification of wild fish behavior can increase vulnerability and susceptibility to predation. This dynamic can occur during juvenile releases in the freshwater environment, during estuary rearing phases, and especially when adult hatchery fish return to spawn and congregate in restricted areas such as below dams and partial migratory barriers.

(2) *Predation by factory fish:*Factory fish have also been documented directly preying upon smaller wild fish. This direct consumption of fry and fingerlings is highest in areas where artificially produced fish and wild fish commingle. Direct predation of wild fish by factory fish is likely highest when artificially produced smolts encounter naturally produced, emerging fry or when they are disproportionately larger than wild fish. Cases of direct predation have been documented where factory fish consume wild fish ½ of their total size once they have been released (Pearsons and Fritts 1999). Hawking and Tipping (1998) observed artificially produced age 1 coho salmon and steelhead trout predating on other salmonid fry appearing to be chinook. Seward and Bjornn (1990) have also documented substantial predation impacts by artificially produced chinook preying upon their own species. In instances such as these, factory fish preying directly upon wild fish results in the direct take of ESA listed species.

(3) *Residualization:* In steelhead trout, and to a lesser extent within Chinook and coho, modified feeding behavior can affect residualization, meaning that they will not migrate to salt water, but will instead remain in the river as resident fish. Residualization is a common occurrence with artificially produced steelhead (Naman 2008, Hausch and Melnychuk 2012, Melnychuk *et al.* 2014). The

addition of these residualized factory fish constitutes a significant modification to the habitat of wild salmonids. These residualized factory fish will harm, displace, and most likely prey upon other juvenile salmonids . In some areas of the Northwest, residualization rates are as high as 20-80% (Snow and Murdoch 2013, McMichael *et al.* 2014). Residualized factory fish are also not limited to the areas surrounding the factory, Schuck *et al*. (1998) reported residualized factory steelhead approximately 20 kilometers below and 10 kilometers above release sites.

d.) *Marine derived nutrients:* As noted in the DNS 21-008: ANADROMOUS SALMON AND STEELHEAD HATCHERY POLICY C-3624, fish are managed for recreation and harvest, and are not intended to provide conservation benefits to natural populations from intentional supplementation or captive breeding. Fisheries, which meet management objectives, will result in the harvest of as many factory fish as possible to limit genetic and ecological interactions. If adhering to pHOS performance targets, factory fish do not naturally contribute marine derived nutrients. It is estimated that just 6-7% of the marine derived nitrogen and phosphorus once delivered to rivers of the Pacific Northwest currently reach watersheds (Gresh et al. 2006). Artificial propagation has been shown to negatively influence the spatial distribution, productivity, diversity, and abundance of wild fish populations and thus also continues to exacerbate the deficit of marine derived nutrients to watersheds throughout the Northwest. The long term reliance of out-planting post-mortem factory fish is expensive, unable to predict and account for how nutrients are naturally distributed throughout the watershed, and constitutes a dangerous vector for hatchery borne diseases to spread. As noted in Kohler *et al.* (2013), nutrient fluxes are not always unidirectional, and especially in cases with poor juvenile survival, nutrient exports through emigration to the ocean can be greater than marine derived nutrients returning through adult anadromous fish migrations.

Overall, the ecological risk of artificial propagation is the replacement of wild fish by factory fish (Hilborn & Eggers 2000, Quiñones et al. 2012). When fish produced through artificial production interact with wild fish in a limited carrying capacity, factory fish may replace rather than augment wild populations (Hilborn 1992).

3. Genetic Impacts

Wild fish throughout the Northwest are defined by their sense of place, or their high fidelity to return to their birthplace. Their ability to migrate to the ocean and return to their natal stream has profound implications on population structure and has encouraged fine scale genetic adaptations to specific habitats used throughout their lifecycle and geographic range. The genetic risks that artificial propagation poses to wild populations can be broken down into: a.) *loss of genetic variability,* b.) *outbreeding and inbreeding effects,* c.) *domestication selection* and e.) *Epigenetic Impacts.* These genetic effects are caused by removing the ability of natural mate selection when gametes are artificially inseminated in the factory.

a.) *Loss of genetic variability:* The loss of diversity occurs both within populations and between populations. Within populations, loss of genetic diversity occurs when mass artificial insemination reduces the quantity, variety, and combinations of alleles present (Busack and Currens 1995). Genetic diversity within a wild population changes from random genetic drift and from inbreeding depression. The process of genetic drift is governed by the effective population size, rather than the observed number of breeders. Although many fish might be present on the spawning grounds the effective population size is smaller than the census size.

Artificial propagation has been found to reduce genetic diversity and cause higher rates of genetic drift due to small effective population sizes (Waples *et al.* 1990). Negative impacts of artificial propagation on population diversity often manifest as changes in morphology (Bugert *et al.* 1992) and behavior (Berejikian 1995).

b.) *Outbreeding and inbreeding depression:*

(1) Inbreeding depression: the interbreeding of individuals related to one another, occurs in the wild when populations experience significant declines due to habitat destruction, overharvest, or other factors that limit the number of fish. In fish factories, the practice of artificial insemination does not differentiate between related individuals during the fertilization process, so the likelihood of inbreeding depression is increased regardless of the population size. Inbreeding depression does not directly lead to changes in the quantity and variety of alleles, but instead homogenizes the population which is then acted upon by the environment. The fish factory rearing environment, consisting of either concrete raceways or circular tanks, likely contrasts significantly to the natural selection in the stream environment, thus leading to an increase of deleterious alleles and a reduction in the fitness of the population (Waldman and McKinnon 1993). There is substantial data on the effects of inbreeding depression in rainbow trout (Hard and Hershberger 1995, Meyers et al. 1998) and in steelhead trout, this factor alone has been attributed to a 1-4% decline in productivity (Christie *et al.* 2014).

(2) *Outbreeding depression*, or the fitness and/or diversity loss associated with gene flow from other, genetically distinct fish populations, can also pose significant consequences for native fish. Fine-scale local adaptations occur through random genetic drift and natural selection (Taylor 1991, McElhany *et al.* 2000). Even with a high degree of homing behavior, some fish do return to spawn in watersheds other than where they were born. When fish successfully reproduce in watersheds in which they were not born, they are considered to have “strayed.” Stray fish result in gene flow between populations. Outbreeding depression impacts natural fish populations when artificially produced fish stray at rates many times higher than natural fish, leading to interbreeding with distant wild population and causing their offsprings to exhibit a lower fitness in the natural environment. Outbreeding depression is exacerbated by the factory setting because the artificial infrastructure inhibits olfactory (Dittman et al. 2015) and geomagnetic (Putman *et al* 2014) imprinting on a home stream. Straying in native fish populations is a natural process which counteracts the loss of genetic diversity and helps to recolonize vacant habitat but usually occurs at very low levels (Quinn 2005). Fish artificially raised in factories can create unnatural gene flow in terms of the sources of stray fish and the high proportion of fish that stray. The more outbreeding depression acts, associated with an increase of exogenous spawners, even if immediate consequences are concealed, populations will possess less adaptive capacity to face new environmental challenges (Gharrett *et al.* 1999). It is important to note that effects arising from the interbreeding of artificially and naturally raised individuals from within the same population arise from domestication selection, which impacts act differently than outbreeding depression.

(3) *Domestication Selection* occurs when fitness loss and changes occur due to differences between the factory and natural environments. The process of domestication occurs, intentionally or unintentionally,
when there are changes in the quantity, variety, and combination of alleles between artificially inseminated fish and naturally produced fish as a consequence of captivity. The National Marine Fisheries Service defines domestication as the selection for traits that favor survival within a [factory] environment (Busack and Currens 1995). Domestication selection impacts natural fish when they interbreed with artificially produced fish adapted to the factory environment and suffer a reduced fitness (Ford 2002). This can occur in three principle ways: intentional or artificial selection, biased artificial propagation, and relaxed selection

A. Intentional or artificial selection is the attempt to change the population to meet management needs, such as spawning time, return time, out outmigration time. Natural populations are impacted when hatchery adults spawn with wild fish and the performance of the population is reduced. This is also a form of outbreeding depression.
B. Biased artificial propagation is caused during the selection and rearing of captive fish. Factory operations are always a source of biased sampling when groups of fish are fed, reared, sorted, and treated for disease.
C. Relaxed selection occurs through artificially high juvenile survival rates during early life stages. Factories are a simplified, sheltered environment that is meant to increase survival relative to the natural environment, and allows deleterious genotypes to move into later life history stages and future generations which wouldn't otherwise be expressed.

(4) *Epigenetic change* has also recently been pinpointed as another impact causing the depletion of biological diversity associated with fish factories. Epigenetics is the study of changes in organisms caused by modification of gene expression rather than alteration of the genetic code itself. It is now well-known that the vast share of any organism's DNA remains latent and unexpressed as the organism develops and lives its life. Epigenetics is the means to study which portions of an organism's DNA are in fact expressed, and what environmental, physiological, behavioral, and other factors cause differences in gene expression as organisms develop (Gavery and Roberts 2017). The DNA of the genome confers to an organism its potential capacity to express variation and range of traits; epigenetic study provides us with the tools to understand how environmental influence controls the realized expression of DNA-determined traits, thus determining the actual health, survival and fitness of the organism. Le Luyer at al. (2017) and Gavery and Roberts provided compelling evidence for epigenetic changes in factory-reared fish and shellfish compared to their wild counterparts.

Given the overwhelming evidence of genetic impacts factories cause on wild fish, we also cite numerous studies showing the intersection between the four factors outlined above:
Reisenbichler and Rubin (1999) reference five other studies which find that hatchery programs which captively rear fish for over 1 year, (i.e. steelhead, stream-type chinook, and coho salmon) genetically change the population and

consequently reduce survival for natural rearing. In the study, the authors found substantial genetic change in fitness resulting from traditional artificial propagation when fish were held in captivity for more than 25% of their life span. Building off of these findings, morphological and behavioral changes were found in artificially produced, adult, spring Chinook including a reduced number of eggs relative to wild fish (Bugert *et al 1992).* (Leider *et al* 1990) reported diminished survival and reproductive success for the progeny of artificially produced steelhead when compared to naturally produced steelhead in the lower Columbia River. The poorer survival observed for the naturally produced offspring of factory fish was likely due to the the long term artificial and domestication selection in the factory produced steelhead population as well as mal-adaptation of the fish population within the factory to the native stream environment. In a paper on the reproductive success of hatchery fish in the wild, it was reported that factory fish did not produce fish that could match the survival or reproductive success of wild fish, even with the use of predominantly wild-origin broodstocks (Christie 2014). These findings were consistent despite differences in geographic location, study species, artificial propagation methods, and artificial rearing practices. Recent research has also documented an epi-genetic impact fish factories pose on wild fish through reduced recruitment on populations that consist of artificial production (Christie 2016). Even within a single generation, domestication selection altered the expression of hundreds of genes to rapidly favor the artificial spawning and rearing environment. Moreover, these traits could be passed along to wild populations if factory fish spawned with natural fish.

4. Indirect impacts

Because factory fish intersect considerably with naturally produced fish, they also pose indirect impacts from activities and decisions stemming from their presence. These impacts include: *Direct and Indirect take through fisheries*, *Monitoring, and Opportunity costs.*

a.) *Direct/Indirect take:* Fisheries directed on artificially produced fish can also harm and/or cause wild fish mortality. Depending on how the fishery is structured, the commercial and recreational pursuit of artificially produced fish can lead to a taking of wild populations in excess of what would be compatible with their minimum viability.

b.) Monitoring: Under the endangered species act, monitoring and evaluation of artificial production is mandated to ensure that activities associated with captive rearing do not limit the recovery of listed populations. Monitoring activities themselves are identified as actions associated with various levels of take on listed species.

c.) *Opportunity costs:* The opportunity costs for funding hatchery programs instead of other fish creating investments like habitat restoration continue with integrated as well as segregated broodstock programs. Ogston et al. 2015 found that habitat restoration opportunity cost in natural fish vs artificial producti were comparable on a single brood year basis. However, habitat restoration then continues to naturally produce fish in subsequent generations while artificial rearing practices require indefinite, continued funding to support subsequent brood years.

5. Environmental Justice

Environmental Justice and its principles (Taylor 2000) has been largely ignored while considering the impacts of artificial production programs as related to fish. One example of this is the apparent role such programs play facilitating and justifying the continued degradation of the natural environment and control of minority peoples. Fish factories concentrate power within limited government systems (agencies, decision making processes, and knowledge banks). The condensed number of voices deciding on these issues continue to reinforce the status quo without regard to other interests and perspectives- those of which would both alleviate pressures on the environment as well as open enjoyment and use of public resources to more than than the few elite. The current rhetoric maintains that fisheries are not possible without continued factory operation. Every year, millions are spent on hatchery programs, artificially producing, captively rearing, and releasing fish because of the loss of fishing opportunity Disproportionately, the artificial production of fish has benefited recreational and commercial fishers as compared to others, while the impacts (1-4 above) and funding burden have been externalized to other members of society (non-fishers). However, if this type of investment in public resources currently being funneled into factory operation was reallocated to habitat restoration, these fisheries as a whole would be healthier and self-sustaining and more beneficial to all members of our society, eliminating the "need" for continued artificial production.

Communities of color that value fish and the habitats that support them for non-extractive direct use (tourism), for indirect values (ecosystem services), and for non-use purposes (existence, intrinsic, and bequest values) have and continue to be displaced. Continuing to operate fish factories in Washington State for fishery augmentation purposes adds an additional biological impact which contributes risk to wild runs of Steelhead and Salmon. Adding additional risks for these species by bombarding them with artificially mass produced fish (which impose the above impacts 1-4) detracts from the transition towards a sustainable wild fishery, and exacerbates the ongoing inequity disadvantaged communities experience (as discussed in Phedra, Pezzullo and Sandler 2007). The financial resources fish factory facilities require to operate also allocates resources away from solving the root problem of species and ecosystem decline, including, but not limited to, habitat restoration and pollution abatement.

In the case of the Washington State, hunting, foraging, and fishing was traditionally conducted by members of the hundreds of indigenous tribes and nations. Many other nations not considered here likely intercepted the fish of the in estuarine, and ocean habitats. Wild fish constituted a significant portion of tribal people's diets. In addition, wild fish represented, and continue to represent, significant spiritual meaning. Tribal participation, as sovereign nations, in decision making is important to artificial fish production considerations. To some peoples, fish factories are an expression and representation of exploitative capitalist tactics that have contributed to undermining species integrity and further contributing to the oppression of minorities.

Non-fishers should also be provided the ability to assert decision-making power on fisheries, as significant public financial resources are allocated to hatchery production that only benefits a few.

Conclusion:

In conclusion, we believe a healthy river is the best hatchery for wild fish. Mass producing fish in a factory setting with the goal of enhancing population health cannot operate indefinitely because of their dependence on naturally produced fish. Due to the numerous impacts of the artificial production of fish and the substantial environmental justice concerns, we encourage WDFW to conduct a throughout viability analysis, such as that done in the AHA model, to determine how threatened fish in the State of Washington are affected by the proposed action and make the analysis available to the public.

Thank you for the opportunity to voice our concerns about this critically important issue. We hope that WDFW values the comments raised in this letter and heeds our strong recommendation to develop an exit plan for artificial production facilities in the State of Washington.

Sincerely,

J. Michelle Swope
Native Fish Society
Washington State Coordinator

Washington Fish and Wildlife Commission Dec.1, 2020
600 Capitol Way
Olympia, WA 98501

Dear Commissioners,

It is with great dismay, I respond to your new hatchery reform plan. I was hired in 1989, as the Washington Dept. of Wildlife's hatchery evaluation biologist for Mitchell Act hatcheries. I retired after 28 years with the Department. I am concerned with declining fish trends.

This new policy is a sham, undoing the hard work of many research scientists over the years. WDFW has always claimed "Best Available Science" (BAS) would guide its decision making. This is not BAS, but undercuts science to provide extra fish for harvest, without evaluating the consequences. It perpetuates status quo, dismisses modern fish science, and won't pass Federal muster. WDFW used to be in the forefront of fisheries science. This does no onger appear to be the case

In 1995, WDFW produced a Wild Salmonid Policy which is still on the books and should direct fish management (WDFW 1995). Its purpose was to protect wild fish stocks by setting escapement goals and modifying harvest and hatchery practices to benefit wild fish runs. In 1999, WDFW was asked to provide a measure of hatchery reform, and the Gorton Science Advisory team was created, discussing hatchery principles and emerging issues. In 2005, Mobrand et al.; wrote a paper on Washington hatchery reform. This was followed and expanded in 2009 by the original WDFW Hatchery Reform Policy crafted by the Hatchery Scientific Review Group and Long Live the Kings. This drove hatchery operations for the next decade. Finally, last year at your request, Anderson, et al. (2020) conducted another review of hatchery reform science in the State. Its "Overarching themes" were:

- Hatchery reform is but one of several factors requiring careful planning and aggressive implementation needed to achieve meaningful recovery of salmon populations
- Hatchery reform is largely aimed at reducing risk in a relative but not absolute sense
- In WDFW's hatchery system, a focus on efficiency and maximizing abundance prevents widespread implementation of risk reduction measures

Inexplicably, the commission has chosen to disregard over two decades of hatchery reform policy, and the recently released Anderson et al. review, to pursue your new plan.

Currently, we see reduced numbers of hatchery fish surviving to return to harvest or their hatcheries of origin. SAR's are as low as they have ever been, when calculated at all. The new policy changes integrated and segregated populations to conservation and fishery supplementation hatcheries. Mitigation hatcheries will hopefully counter habitat damage, which never should have been permitted in the first place. Hatcheries cannot make up for damaged habitat. It's an impossible task, and hasn't succeeded. The process of "domestication" within hatcheries has not been fully addressed. It should be.

Increased harvest is a poor excuse for increasing hatchery production, in times of ESA listings. Fish life histories extend beyond the hatchery. Fish need to deal with ocean conditions. An excess of hatchery fish already exists in the North Pacific Ocean, from Russia, Japan, Korea, B. C. and the western United States. Other nations hatchery practices and releases are not referenced in the new policy. North Pacific carrying capacity cannot support all these hatchery fish. Fish are becoming smaller and younger, when harvested or returning to hatcheries.

Harvest should not dictate hatchery production levels, but complement the ocean's carrying capacity. There are already too many hatchery fish in competition with each other. This competition affects "wild"

stocks also. Carrying capacity is already exceeded. Has the commission considered Russian, Japanese or Korean hatchery outputs? My guess is no. Can Asian hatcheries flood the north Pacific with smolts? Potentially, yes, they can.

Hatcheries need proper evaluation. Success should be measured in the number of returning adults, not in smolts released. Hatcheries with poor SAR's should be re-examined or eliminated. WDFW has not been successful in reducing pHOS, so is this the reason for changing policy? What happened to the pHOS - pNOR ratios promoted by the HSRG? Do we just disregard it?

Another major deficiency in our system is a lack of scientific monitoring to determine the effects of hatchery fish on individual runs of wild salmon. The new policy states this will be done. But, I have yet to see WDFW reports on how well the hatchery program is succeeding. I have seen no WDFW hatchery review in the scientific literature, yet alone how different hatchery stocks are faring. How will you quickly know if the new programs are succeeding? WE need real monitoring, not just a promise.

Wild fish cannot just be written off. The Endangered Species Act still advocates for their protection. It is unlikely federal fish management agencies will support your new policy, particularly with a new harvest minded administration. I am not sure federal HGMPs will be approved due to a dearth of data.

A study designed to evaluate the progress and effectiveness of hatchery reform was proposed, but not completed as designed, because data was not available for 159 hatchery programs. This is scandalous. If the previous study was abandoned, why should we believe a future review will be successful. Hatcheries need evaluations of success.

A defined percentage of hatchery funds should be set aside for monitoring and analyzing both the local and cumulative effects of hatcheries. Fisheries targeting abundant hatchery runs can unintentionally increase mortality of co-mingled natural populations. Wild fish bycatch is inevitable in mixed stock fisheries built on expanding hatchery production. It must be accounted for.

Agency credibility is on the line. As an area bio, I was tasked with promoting steelhead gene banks to our angling constituents. This was a hard sell, eliminating hatchery plants on favored rivers. But, we succeeded here in SW Washington on the East Fork Lewis, the Green, and Gray's Rivers. It appears successful on the E. F. Lewis. What do we tell our constituents now? These programs haven't been fully evaluated. We propose a program, and then abandon it without analysis or explanation. Our credibility with the public is already at a nadir over hoof rot and fishing opportunity issues.

Many salmonid stocks were listed under the ESA in the 1990's. None have been delisted. Where is the hatchery contribution to delisting these runs? We may get there with Hood Canal chum. But, no other stocks are even close to delisting, and most continue to decline. Where is Agency's concern? Are you pleased having stocks go extinct on your watch?

The recent "State of the Salmon" report documents just how WDFW has failed the citizens of Washington. It is called **Salmon at the Crossroads: Time is Running Out.** It states,

> "Today, Washingtonians stand at a fork in the road with a clear choice: Continue with current practices and gradually lose salmon, orcas, and a way of life that has sustained the Pacific

Northwest for eons. Or, change course and put Washington on a path to recovery that recognizes salmon and other natural resources as vital to the state's economy, growth, and prosperity." (Governor's Salmon Recovery Office, 2020)

Thirty years ago, the first Snake River sockeye were ESA listed. They still are. Since then, 14 species have been listed in Washington; none have reached recovery. Only one stock, Hood River chum appears to be moving to recovery. How will this new reform policy sustain these stocks. When will you get serious about the declining salmon problem?

I could spend much time discussing hatchery and wild genetics; domestication within hatcheries, natural rearing regimes, and declining baselines but I do not see any point. How can we discuss science, when you, as a group, have chosen to abandon fish science? I do not believe the new policy will suffice to obtain NOAA Fisheries HGMP standards for WDFW hatcheries. Salmon will still be at the Crossroads. I do not believe the Feds will agree to let you operate after abandoning the 2009 hatchery policy. I will push for federal review of the new policy demanding an EIS and full compliance with SEPA and NEPA review.

This feels like the rearrangement of deck chairs on the Titanic. I am embarrassed at the commission's apparent willingness to abandon science, just to promote harvest expedience. I expect overall fish returns to continue their decline with this new policy, and more stocks go extinct. This will contribute to the continued erosion of WDFW credibility in the eyes of Washington's citizens.

Thanks for your attention,

Jim Byrne

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