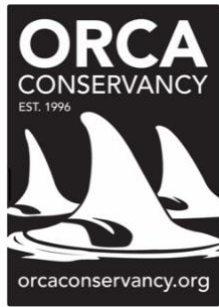


# **Orca Conservancy**

Please add the following comments to the record from Orca Conservancy. Thank you.



June 5, 2020

Sent electronically to: [laurie.niewolny@ecy.wa.gov](mailto:laurie.niewolny@ecy.wa.gov) and <http://wq.ecology.commentinput.com/>

Washington State Department of Ecology  
Water Quality Program  
PO Box 47600  
Olympia, WA 98504-7600  
Laurie Niewolny

RE: Cooke Aquaculture National Pollutant Discharge Elimination System (NPDES) Application to rear *Oncorhynchus mykiss* in Puget Sound | Open Water Net Pens

Dear Laurie Niewolny,

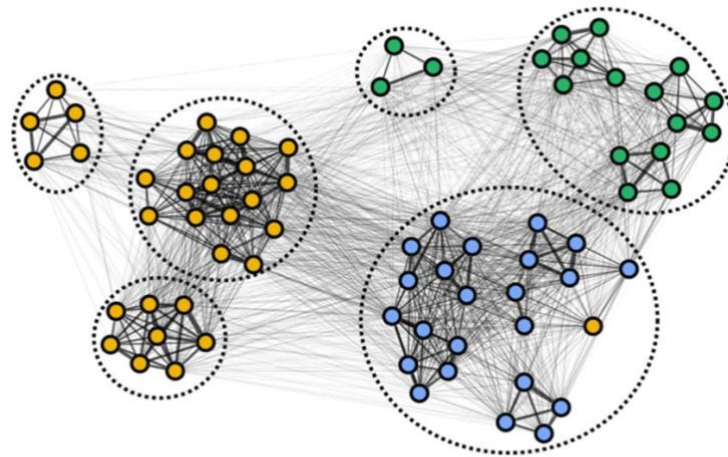
Thank you for the opportunity to comment on decisions regarding Cooke Aquaculture's National Pollutant Discharge Elimination System (NPDES) Application to rear *Oncorhynchus mykiss* (*O. mykiss*) in Puget Sound with open water net pens. Orca Conservancy and its 35,000+ members and supporters are in opposition of granting Cooke Aquaculture (Cooke) permit(s) to rear *O. mykiss* in Washington State waters; Puget Sound. Please add the following comment to the record, and review our November 3, 2019 comment (attached) sent to the Washington Department of Fish and Wildlife (WDFW). Additionally, Orca Conservancy is an active member of the Our Sound, Our Salmon Coalition, a campaign coordinated by the Wild Fish Conservancy.

Orca Conservancy is a 501c3 Washington State nonprofit working on behalf of *Orcinus orca*, the killer whale, and protecting the wild places on which it depends. Our urgent attention is on the 72 remaining critically endangered Southern Resident killer whales (SRKWs) which inhabit the waters of Washington State. SRKWs are dietary fish-specialists and depend on abundant populations of healthy, wild salmon for their survival, social cohesion and reproductive success. Orca Conservancy works towards increasing prey resources, reducing the accumulation of marine toxins, including reducing the destruction of salmon spawning and nearshore habitats; nurseries of the Salish Sea.

In November 2005, the critically endangered SRKW population was listed under the Endangered Species Act (ESA). Today, June 5, 2020, the 72 remaining SRKWs are down FIFTEEN family members from when they were

initially listed. Scientifically, this population needs to maintain a *minimum* of 200 members to reach historical levels.<sup>1</sup>

The remaining 72 critically endangered SRKW population consists of three pods: J-Pod (**blue**), K-Pod (**green**), and L-Pod (**yellow**):



Endangered orcas' social networks. Dashed ovals show orcas' main social clusters, while line thickness indicates the likelihood of a whale in J (blue), K (green) or L (orange) pod surfacing close enough to inhale another orca's breath.  
CREDIT: WEISS ET AL., "MODELLING CETACEAN MORBILLIVIRUS OUTBREAKS IN AN ENDANGERED KILLER WHALE POPULATION," BIOLOGICAL CONSERVATION, 2020. »

Instead of focusing on how to assist with recovery of the 72 SRKW left, we must change our mindset and start focusing on the 128+ SRKW that are essentially **missing** from this population due to human destruction, and corporate greed. Bold decisions are not only necessary in protecting the environment, but it will allow the SRKW population a much clearer path towards recovery.

Critical habitat is designated for the SRKW as described below. The textual descriptions of critical habitat in section **§226.206** are the definitive source for determining the critical habitat boundaries. (The overview map (below) is provided for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

(a) *Critical Habitat Boundaries.* Critical habitat includes three specific marine areas of Puget Sound, Washington, within the following counties: Clallam, Jefferson, *King*, *Kitsap*, Island, Mason, Pierce, San Juan, *Skagit*, Snohomish, Thurston, and Whatcom. Critical habitat includes all waters relative to a contiguous

<sup>1</sup> 1972. Palo G.J. put forth a tentative estimate of 225-300 whales for Puget Sound and the Georgia Basin in 1970. Notes on the natural history of the killer whale (*Orcinus orca*) in Washington State. Murrelet 53-22-24

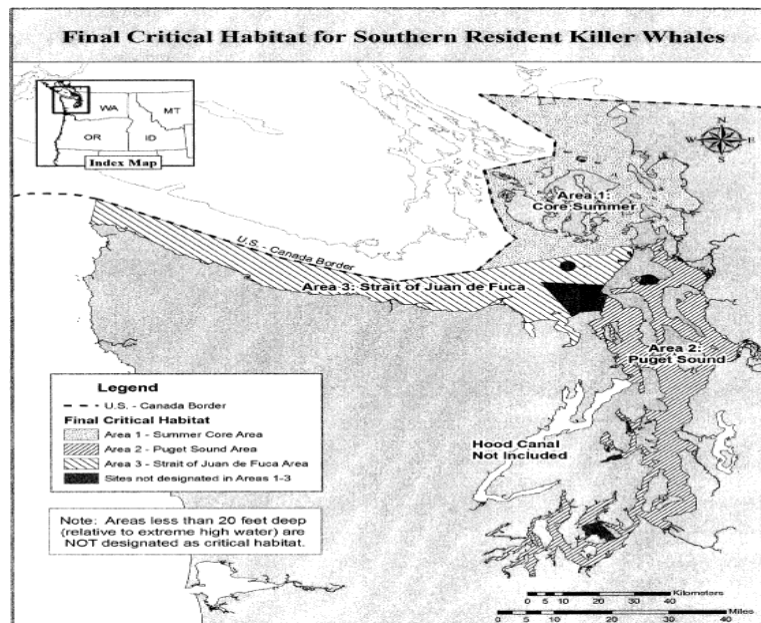
shoreline delimited by the line at a depth of 20 feet (6.1 m) relative to extreme high water in each of the following areas:

(1) *Summer Core Area*: All U.S. marine waters in Whatcom and San Juan counties; and all marine waters in Skagit County west and north of the Deception Pass Bridge (Highway 20) (48°24'25" N./122°38'35" W.).

(2) *Puget Sound Area*: All marine waters in Island County east and south of the Deception Pass Bridge (Highway 20) (48°24'25" N./122°38'35" W.), and east of a line connecting the Point Wilson Lighthouse (48°8'39" N./122°45'12" W.) and a point on Whidbey Island located at 48°12'30" N./122°44'26" W.; all marine waters in Skagit County east of the Deception Pass Bridge (Highway 20) (48°24'25" N./122°38'35" W.); all marine waters of Jefferson County east of a line connecting the Point Wilson Lighthouse (48°8'39" N./122°45'12" W.) and a point on Whidbey Island located at latitude 48°12'30" N./122°44'26" W., and north of the Hood Canal Bridge (Highway 104) (47°51'36" N./122°37'23" W.); all marine waters in eastern Kitsap County east of the Hood Canal Bridge (Highway 104) (47°51'36" N./122°37'23" W.); all marine waters (excluding Hood Canal) in Mason County; and all marine waters in King, Pierce, Snohomish, and Thurston counties.

(3) *Strait of Juan de Fuca Area*: All U.S. marine waters in Clallam County east of a line connecting Cape Flattery, Washington (48°23'10" N./124°43'32" W.), Tatoosh Island, Washington (48°23'30" N./124°44'12" W.), and Bonilla Point, British Columbia (48°35'30" N./124°43'00" W.); all marine waters in Jefferson and Island counties west of the Deception Pass Bridge (Highway 20) (48°24'25" N./122°38'35" W.), and west of a line connecting the Point Wilson Lighthouse (48°8'39" N./122°45'12" W.) and a point on Whidbey Island located at 48°12'30" N./122°44'26" W.

(b) An overview map of final critical habitat for the Southern Resident killer whale follows.



(c) *Primary Constituent Elements*. The primary constituent elements essential for conservation of the SRKW are:

- (1) Water quality to support growth and development;
- (2) Prey species of sufficient quantity, quality, and availability to support individual growth, reproduction, and development, as well as overall population growth; and
- (3) Passage conditions to allow for migration, resting, and foraging

Congress passed the Clean Water Act (CWA) to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U. S. C. §1251(a); see also PUD No. 1, 511 U. S., 700, 714, the “national goal” being to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.” 33 U. S. C. §1251(a)(2). Section 401 is a critical piece of the CWA which was specifically written to block or reduce environmental impacts from fossil fuel pipelines, hydroelectric and other dams, cooling water intakes, large commercial and housing developments, mining, dredging, and other destructive projects that require a federal license or permit.

Thus, Congress, responding to the nation’s need for clean water supplies, passed the CWA to create a means by which to reduce the amount of water pollution nationwide.<sup>2</sup> In order to correct the water pollution problem...<sup>3</sup> the CWA defines the term “discharge of pollutants” to mean “*any addition of any pollutant to navigable waters from any point source.*”<sup>4</sup>

The CWA defines a ‘*point source*’ as “any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, *concentrated animal feeding operation*, or vessel, or *other floating craft from which pollutants are or may be discharged.*”<sup>5</sup> ‘*Nonpoint sources*’ are defined as those sources not traceable to a single conveyance.<sup>6</sup>

The CWA defines “*pollutant*” as “dredged spoil, *solid waste*, incinerator residue, sewage, garbage, sewage sludge, munitions, *chemical wastes*, *biological materials*, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and *industrial, municipal, and agricultural waste* discharged into water.”<sup>7</sup> The CWA extends to both animate and inanimate pollutants.<sup>8</sup> The statute, for example, regulates fecal coliform (living bacteria) as conventional pollutants.<sup>9</sup> The Washington Pollution Control Board has also found that escaped salmon are “*agricultural or industrial waste*,” another statutory example of the definition of pollutant.<sup>10</sup> As the federal government also considers aquaculture to be a form of agriculture, escaped salmon may similarly be treated as *agricultural or industrial waste* under the CWA.<sup>11</sup> Meaning, said pollutant,

<sup>2</sup> 1996. Jeff L. Todd, Note, *Environmental Law: The Clean Water Act—Understanding When a Concentrated Animal Feeding Operation Should Obtain an NPDES Permit*, 49 Okla. L. Rev. 481, 482–83

<sup>3</sup> 33 U.S.C. 1311(a)

<sup>4</sup> *Id.* 1362(12)

<sup>5</sup> 33 U.S.C. 1362(14)

<sup>6</sup> William H. Rodgers, Jr., Handbook on Environmental Law, 4.4, at 375 (1977); S. Rep. No.92–414, at 212 (1972), reprinted in 1972 U.S.C.C.A.N. 3668, 3760. Senator Bob Dole defined a nonpoint source as “one that does not confine its polluting discharge to one fairly specific outlet, such as a sewer pipe, a drainage ditch or a conduit. . . .” *Id.*

<sup>7</sup> 33 U.S.C. 1362(6)

<sup>8</sup> 1997. Marine Env'tl. Consortium v. Department of Ecology, PCHB No. 96–257, 1997 WL 394651, at \*4 (Wash. Pol. Control Bd. May 27, 1997)

<sup>9</sup> 33 U.S.C. 1314(a)(4)

<sup>10</sup> 1998. Wash. Rev. Code Ann. 15.85.010 (West)

<sup>11</sup> 1996. Robert R. Stickney, *Aquaculture in the United States: A Historical Survey* 228 (stating that the Department of Agriculture was involved in the aquaculture industry in the late 1970s and that it controlled the specific area of inland species which were of commercial interest) [hereinafter Stickney, *Historical Survey*]; 33 U.S.C. 1362(6)

must be introduced into the water from outside the water.<sup>12</sup> Therefore, open net fish farms, in theory... *“physically introduces a pollutant into water from the outside world.”*<sup>13</sup>

Cooke Aquaculture’s (Cooke’s) track record of prior CWA violations including not following adopted plans has been well documented. From the 2017 failure at the Cypress Island location in Skagit County, and then again with the 2019 partial sinking at the Orchard Rocks location. Cooke clearly demonstrates an inability to ensure adequate emergency response measures. Following the 2017 Cypress Island net pen collapse, [Wild Fish Conservancy sued Cooke Aquaculture under the Clean Water Act](#) (CWA). That suit resulted in rulings that the company (Cooke) had violated the terms of its permits, including by failing to conduct required inspections of net pen moorings and anchors, to accurately monitor and report the number of fishes escaping from pens, to develop operational plans that include necessary procedures for inspecting cages, storing chemicals, disposing of harvest blood, and to track the number of fishes in its cages and lost to predation. Finally, the discharges of pollutants from aquaculture fish farms result in numerous adverse environmental effects:

- (1) decreases in oxygen levels in the water;
- (2) increased harm to benthic ecosystems;
- (3) greater numbers of toxic algae blooms;
- (4) an increase in the adverse effects on organisms due to toxic chemical pollutants; and,
- (5) increased competition between native salmon and escaped fish for food and resources

Further, the investigative process of the 2017 collapse shows a perverse lack of consideration by Cooke in regards to record keeping, proper maintenance protocol, and principle of the net pen structures -- which ultimately resulted in the failure. Additionally, the investigation report concluded that Cooke withheld information and details about the pen failure to Washington State agencies responsible for their regulation. Cooke then went a step further and reported they had cleaned up their debris and the seafloor under the failed pens as directed by the State. However, the State, upon inspection, found that there was still debris on the seafloor and had to force Cooke to complete the mandated work. Cooke’s history of CWA violations is important to consider in this process, if nothing else to ensure that the permits are drafted to ensure that violations are detected before catastrophe ensues.

Incidents like the partial sinking of the Orchard Rocks pen in October, 2019, mentioned above, demonstrates that the risks of additional escapes are very real, given the state of the existing pen structures. The response to the 2019 incident was conducted by several Washington State agencies, including Ecology, and the records from the aforementioned incident, and the state agencies’ documentation of Cooke’s inadequate emergency response must be included in this record to ensure that emergency plans incorporate lessons learned, and acknowledge the degraded state of the surviving pens as identified by state inspectors and Cooke’s own contractors.

In large part HB 2957 was passed into law during the 2018 65<sup>th</sup> Legislative Session because, *‘evidence emerged that nonnative marine finfish aquaculture may endanger Washington’s native salmon populations, so too has evidence emerged that marine finfish aquaculture in general may pose unacceptable risks not only to Washington’s native salmon populations but also to the broader health of Washington’s marine*

<sup>12</sup> *Consumers Power*, 862 F.2d at 588–89; *Gorsuch*, 693 F.2d at 174–75

<sup>13</sup> *Gorsuch*, 693 F.2d at 175; see *Consumers Power*, 862 F.2d at 584



*environment*'.<sup>14</sup> HB 2957 instructed the State of Washington to create new and stricter regulatory management specifically for net pen aquaculture, and to phase out Atlantic salmon aquaculture by 2022. That places the Ecology, and other agencies in charge of regulating said open water net pens, to eliminate commercial marine net pen escapement, and to include the elimination of negative impacts to water quality and native fish, shellfish, and wildlife. The new standards introduced with HB 2957 also requires the re-examination of past decisions and to hold Cooke to a much higher standard of eliminating risks. Ecology should not limit the scope of their review to risks associated with a change of species. Changing the species to the biologically altered, domesticated *O. mykiss* does not eliminate the very foundation that the passage of HB 2957 into law has granted.

The change in species poses new and different risks in addition to the harms open water net pen aquaculture has caused for decades. While Washington State has granted permits to its salmon fish farms, the requirements of these permits are known to be not very strict.<sup>15</sup> Therefore, some policies which may have been permitted for Atlantic salmon under the pre-2017 status quo, pose additional risks with the proposal to introduce a highly-domesticated and partially-sterile form of steelhead. The differences in this circumstance were considered as far back as 1990, when the last comprehensive Environmental Impact Statement (EIS) was drafted. The prior permitting for these pens and their operations all addressed risks associated with a non-native species. In dealing with biologically-altered, domesticated steelhead and Puget Sound's federally-listed steelhead population, again, different risks apply. More importantly, the standards laid out in the 1990 Environmental Impact Statement (EIS) have not been met for these purposes:

- The “a minimum distance of separation between farms and river mouths” has never been considered and adopted in state policy, as section 5.7.2.2 of the 1990 EIS would require for aquaculture involving native fish (and as is required in many other nations). Since escapes, and their risks to threatened steelhead and rainbow trout, constitute pollution and are within the scope of Ecology's review, this guidance and an analysis of the proximity of pens to steelhead spawning rivers should be included in Ecology's review of these NPDES permits. In addition, the assessment of risks from pollution (including diseases) should account for the migration corridors in areas like Rich Passage, which may concentrate wild salmon near the pens
- The behavioral response of wild steelhead to a large aggregation of wild steelhead may be different than it was to Atlantic salmon. If wild schools are attracted to the captive domesticated steelhead in pens, the pollution from the pens may do greater harm to hatchery-reared steelhead and to threatened wild Puget Sound steelhead
- Despite treatment to render the fish infertile (triploid), many fish in the pens will be capable of reproducing. When a net pen collapses, it will release more fertile female steelhead than exist in many endangered wild steelhead runs. When an escape happens, it will be nearly impossible to manage a recovery effort that removes farmed steelhead and does no harm to endangered wild steelhead and bull trout, endangered and threatened salmon, endangered southern resident killer whales, and other protected wildlife in Puget Sound
- The escape of steelhead from any of the Puget Sound aquaculture facilities, whether from small scale leakage or catastrophic facility failure, will pose risks to native salmon, steelhead, and rainbow trout

<sup>14</sup> 2018. Reps: Lytton, Peterson, Robinson, Wilcox, Taylor, Stambaugh, Sawyer, Chapman, Pollet, and Stanford. Engrossed House Bill 2957. Passed. 65th Legislature 2018 Regular Session. <http://lawfilesexternal.wa.gov/biennium/2017-18/Pdf/Bills/House%20Passed%20Legislature/2957.PL.pdf#page=1>

<sup>15</sup> Goldberg & Triplett, *supra* note 2, 296–98

rearing in nearshore marine habitats and rivers due to competition for food and foraging space. This will be particularly true in the case of Cooke's proposed triploid (treatment to render the fish infertile) steelhead because as noted in Cooke's materials, triploid fish have appetites that are likely to be considerably greater than wild juvenile salmon and steelhead due to the faster inherent growth rate of these triploid fish. This means escapees may outcompete wild steelhead, or indeed predate upon them<sup>16</sup>

All that being said, decades of experience show real effects on water quality in the plumes around net pens, which the terms of Cooke's current permit application does not eliminate. This NPDES review should re-examine existing data on effluents from industrial products, medicines, feed, fish waste, and dead and rotting fish to assess whether the current plans eliminate all of those risks. Open net fish farms discharge significant amounts of wastewater containing nutrients, chemicals, and pharmaceuticals that have impacts on the surrounding environment. These aqua-farm wastewater contaminants include fish excrement, uneaten chemical-laden food, and swarms of parasites, which spread pollution and disease to ocean fish in the area and surrounding ocean.<sup>17</sup> The water flowing out of an aquaculture facility can carry with it; excessive particulates, bacteria, diseased organisms and polluting chemicals harming surrounding habitats, causing algal blooms, poisoning marine wildlife and other severe disturbances.<sup>18</sup> Furthermore, feed and fecal matter from these facilities can deplete the dissolved oxygen concentrations around and certainly within the facilities. Even the anti-fouling agents to keep the cages and pens clean are highly toxic.<sup>19</sup> Small fish species, such as forage fish species and out-migrating and rearing wild salmon and trout (including ESA-listed Chinook and steelhead), have to migrate past net pens as they swim across the shoreline, and may be attracted by net pen feed to the point where they physically enter a net pen facility and are vulnerable to disease associated with farmed salmon in the pens-regardless of species.

Washington's Department of Fish and Wildlife's (WDFWs) January 2020 decision to issue a Mitigated Determination of Non-Significance (MDNS) to now farm *O. mykiss*, granted Cooke some key permits and ended the environmental review process under SEPA. This decision was flawed, and is currently being legally challenged in Washington State Court by members of the Our Sound, Our Salmon Coalition to have the Court render the MDNS invalid and require WDFW to reinitiate the SEPA process to conduct additional environmental review such as an updated EIS.

Ecology should not authorize Cooke's modified NPDES permits until this ongoing lawsuit challenging the SEPA environmental review process and determination is complete.

Ecology's NPDES permit review should not begin until there has been thorough consultation with local, state, federal and tribal governments.

Again, no permits should be granted until a SEPA review of this NPDES application chooses instead to order a new draft EIS after making a Determination of Significance (DIS).

<sup>16</sup> 2020. Our Sound, Our Salmon Coalition comment letter submitted to the Washington Department of Ecology, June 8, 2020. Page 2-3.

<sup>17</sup> 2000. Baird, R. W. The Killer Whale: foraging specializations and group hunting. Pages 127-153 in J. Mann, R.C. Connor, P.L. Tyack, and H. Whitehead, editors. Cetacean societies: field studies of dolphins and whales

<sup>18</sup> 1998. Ford, J.K.B., G.M. Ellis, L.G. Barrett-Lennard, A.B. Morton, R.S. Palm, and K.C. Balcomb III. Dietary specialization in two sympatric populations of killer whales (*Orcinus orca*) in coastal British Columbia and adjacent waters. Canadian Journal of Zoology 76:1456-1471

<sup>19</sup> 2013. Krkosek, M., Revie, C.W., Gargan, P.G., Skilbrei, O.T., Finstad, B. and Todd, C.D. Impact of parasites on salmon recruitment in the Northeast Atlantic Ocean. Proceedings of the Royal Society of London B: Biological Sciences, 280 (1750). P. 20122359



Finally, many counties and municipalities have established new rules since the net pens were initially installed which will prohibit construction of new net pens in their waters. While the existing pens in Washington State are 'grandfathered' in, communities and nations should have a full and open opportunity to voice their opinions regarding if the continued operation of open water net pens in Puget Sound actually honors the concerns and needs of their neighbors, including the overall recovery of endangered wild salmon and SRKWs.

Cooke has not demonstrated good faith, nor has this corporation shown a willingness to utilize an actual documented action to put a remedy into place for its serious, previous management lapses (see comment letter to WDFW for additional information, attached) -- but instead, is relying on the status quo and handouts given to corporations due to the lack of political will.

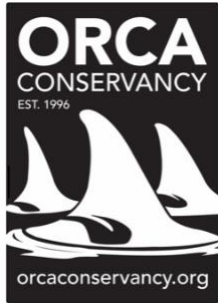
Our environment is on the brink of no return.

Ecology needs to make the bold decisions necessary to reclaim the rivers, estuaries and marine waters for thriving populations of healthy wild fish, and not succumb to crowded, diseased, captive artificial ones.

Sincerely,



Shari L. Tarantino  
Executive Director



November 3, 2019

Sent via electronic email to: [SEPAdesk2@dfw.wa.gov](mailto:SEPAdesk2@dfw.wa.gov)

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

RE: MDNS 19-056: RAISING STERILE ALL-FEMALE TRIPLOID RAINBOW TROUT/STEELHEAD AT EXISTING MARINE NET PEN SITES IN PUGET SOUND

Dear Lisa Wood,

Thank you for the opportunity to comment on decisions regarding Washington's Department of Fish and Wildlife (WDFW) *MDNS 19-056: RAISING STERILE ALL-FEMALE TRIPLOID RAINBOW TROUT/STEELHEAD AT EXISTING MARINE NET PEN SITES IN PUGET SOUND*.

Orca Conservancy is a volunteer 501c3 Washington State nonprofit working on behalf of *Orcinus orca* the killer whale, and protecting the wild places on which it depends. Our urgent attention is on the 73 remaining critically endangered Southern Resident killer whales (SRKWs) that inhabit the waters of Washington State and who rely on healthy, wild Chinook salmon populations for their survival. Orca Conservancy also works towards increasing prey resources, reducing the accumulation of marine toxins, including the destruction of salmon spawning and nearshore habitats; nurseries of the Salish Sea.

**Orca Conservancy • PO Box 16628 • Seattle, WA 98116**

Orca Conservancy and its 30,000+ members and supporters stand in opposition of MDNS 19-056 and request the state to withdraw the mitigated Determination of Non-Significance and instead issue a Determination of Significance, and draft an Environmental Impact Statement (EIS) to not only assess the full impacts of this transition; but to update the outdated EIS from 1990.

Southern Resident killer whales (SRKW) are dietary fish-specialists and depend on abundant populations of healthy, wild salmon for their survival, social cohesion and reproductive success. After over a decade of federal protection, the population has yet to show signs of significant recovery, with 73 members total as of October 2019 – *still **FOURTEEN** members fewer than when they were initially listed*. SRKW survival remains in question and is far from guaranteed and the population growth needs to exceed 200 members to reach historical levels.<sup>20</sup>

Joint NMFS/FWS regulations for listing Endangered and Threatened species and designating Critical Habitat at Section 50 CFR 424.12(b) state that the agencies shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection. Pursuant to the regulations, such requirements include, but are not limited to, the following:

- (1) space for individual and population growth, and for normal behavior;
- (2) food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) cover or shelter;
- (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally;
- (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.<sup>21</sup>

Killer whales frequent a variety of marine habitats that do not appear to be constrained by water depth, temperature, or salinity.<sup>22</sup> Observations of killer whales suggest that the resident pods (J, K, and L) can be spread over hundreds of kilometers at any given point, require open waterways that are free from obstruction to move between important habitat areas, find prey and fulfill other life history requirements. Individual knowledge of productive feeding areas and other special habitats is probably an important determinant in the selection of locations visited and is likely a learned tradition passed from one generation to the next.<sup>23</sup>

Critical Habitat is defined in Section 3 of the ESA (16 U.S.C. 1532(3)) as:

1. The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the ESA, in which are found those physical or biological features (a) essential to

<sup>20</sup> Palo (1972) put forth a tentative estimate of 225- 300 whales for Puget Sound and the Georgia Basin in 1970 (Palo, G. J. 1972. Notes on the natural history of the killer whale *Orcinus orca* in Washington State. Murrelet 53:22-24)

<sup>21</sup> NMFS (National Marine Fisheries Service). 2006. Designation of Critical Habitat for Southern Resident Killer Whales. Biological Report. Available from: [http://www.nwr.noaa.gov/publications/protected\\_species/marine\\_mammals/cetaceans/killer\\_whales/esa\\_status/srkw- ch-bio-rpt.pdf](http://www.nwr.noaa.gov/publications/protected_species/marine_mammals/cetaceans/killer_whales/esa_status/srkw- ch-bio-rpt.pdf)

<sup>22</sup> Baird, R. W. 2000. The Killer Whale: foraging specializations and group hunting. Pages 127-153 in J. Mann, R.C. Connor, P.L. Tyack, and H.

Whitehead, editors. Cetacean societies: field studies of dolphins and whales. <sup>4</sup> Ford, J.K.B., G.M. Ellis, L.G. Barrett-Lennard, A.B. Morton, R.S. Palm, and K.C. Balcomb III. 1998. Dietary specialization in two sympatric populations of killer whales (*Orcinus orca*) in coastal British Columbia and adjacent waters. Canadian Journal of Zoology 76:1456-1471.

<sup>23</sup> Ford, J.K.B., G.M. Ellis, L.G. Barrett-Lennard, A.B. Morton, R.S. Palm, and K.C. Balcomb III. 1998. Dietary specialization in two sympatric populations of killer whales (*Orcinus orca*) in coastal British Columbia and adjacent waters. Canadian Journal of Zoology 76:1456-1471.

the conservation of the species and (b) which may require special management considerations or protection; and

2. Specific areas outside the geographical area occupied by the species at the time it is listed upon a determination that such areas are essential for the conservation of the species. The ESA defines “conservation” as the use of all methods and procedures needed to bring the species to the point at which listing under the ESA is no longer necessary. Additionally, once Critical Habitat is designated, Section 7 of the ESA requires federal agencies to ensure that they do not fund, authorize or carry out any actions that are likely to destroy or adversely modify that habitat. This requirement is in addition to the Section 7 requirement that federal agencies ensure that their actions do not jeopardize the continued existence of listed species.

Congress passed the Clean Water Act to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” 33 U. S. C. §1251(a); see also PUD No. 1, 511 U. S., 700, 714, the “national goal” being to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.” 33 U. S. C. §1251(a)(2). Section 401 is a critical piece of the Clean Water Act which is specifically written to block or reduce environmental impacts from fossil fuel pipelines, hydroelectric and other dams, cooling water intakes, large commercial and housing developments, mining, dredging, and other destructive projects that require a federal license or permit.

Under the State Environmental Protection Act (SEPA), this review requires a threshold determination of whether an action is likely to have a “significant adverse environmental impact.” The State’s current threshold determination of Mitigated Determination of Non-Significance (mDNS) is inadequate as an environmental review and fails to address many well-documented risks associated with farming salmonids in these exact pens. Industrial-scale, open-water finfish aquaculture poses significant environmental risks, and the transition from Atlantic salmon aquaculture to rainbow/steelhead trout aquaculture adds significant risks that cannot be mitigated.

The proposed all-female and sterile fish reduces the risks of genetic interference to native populations. However, the “Final Programmatic Environmental Impact Statement: Fish Culture in Floating Net-Pens,” dated January 1990 (incorporated by reference in the mDNS), and the “Threatened and Endangered Species: 1990 Programmatic EIS Update” do NOT address the fact that if the fish do escape, they could compete with the federally-listed as endangered Puget Sound steelhead for spawning habitat and therefore displace necessary spawning behavior.

The fact that aquaculture is a rapidly developing industry, little scientific work has been done to establish and promote practices which will ensure a sustainable environment. Marine aquaculture operations presently include finfish, shellfish, algae and seaweed as well as their associated hatcheries, operational support, and pen and cage deployment requirements. Aquaculture has many problems, many of which have detrimental effects on ecosystems desperately trying to sustain the many species which rely on it for survival. Uses may conflict between public and private activities, and native aquatic species inhabit areas that may be impacted by the aquaculture infrastructure deployment. Furthermore, nuisance species and populations based on non-point sources are problematic for both sides. Further, it's likely to make the disease problem worse, because these fish would be more closely related to our wild fish than Atlantic salmon.-

The August 2017 collapse of one of Cooke’s farm sites near Cypress Island which allowed more than 250,000 Atlantic salmon to escape into Puget Sound was a motivating factor for legislators to pass -- due in large part, to the hard work of the Our Sound, Our Salmon coalition -- a farming ban in 2018 to phase out Atlantic salmon net pens by 2020. Additionally, Cooke paid in USD a meager \$332,000 penalty to the Washington Department of Ecology to resolve claims arising from the accident.

Cooke’s Vice President of Public Relations, Joel Richardson, said in a recent announcement, "We understand that our relationship with the environment is vital to producing top quality seafood. Cooke Aquaculture Pacific will continue to work with local communities, tribes, and regulators, and we are investing in upgrading operations and equipment. We view this as a significant component of our corporate social responsibility and we are committed to farming sustainably in Washington state as we do in other locations globally."

However, COOKE AQUACULTURE; COOKE AQUACULTURE US; COOKE AQUACULTURE USA; OMEGA PROTEIN; OMEGA PROTEIN has shown time and time again that they are NOT a good neighbor nor are they a corporation that practices what they preach and has no right to continue business here in Washington state. Individual penalty records show they are a violator of pollution within our waterways (see below and attached):

Company	Primary Offense Type	Year	Agency	Penalty Amount
<a href="#">Omega Protein, Inc.</a>	environmental violation	2013	EPA	\$7,500,000
<a href="#">Omega Protein Inc.</a>	environmental violation	2017	EPA	\$1,200,000
<a href="#">Omega Protein Corp.</a>	False Claims Act and related	2019	DOJ_CIVIL	\$1,000,000
<a href="#">Omega Protein Corporation</a>	investor protection violation	2019	SEC	\$400,000
<a href="#">OMEGA PROTEIN, INC.</a>	workplace safety or health violation	2014	OSHA	\$83,900
<a href="#">OMEGA PROTEIN, INC.</a>	workplace safety or health violation	2012	OSHA	\$50,000
<a href="#">OMEGA PROTEIN - REEDVILLE</a>	environmental violation	2007	EPA	\$27,900
<a href="#">OMEGA PROTEIN INC</a>	environmental violation	2010	EPA	\$22,045
<a href="#">OMEGA PROTEIN INC</a>	environmental violation	2013	EPA	\$20,000
<a href="#">OMEGA PROTEIN - REEDVILLE</a>	environmental violation	2001	EPA	\$18,600
<a href="#">OMEGA PROTEIN - REEDVILLE</a>	environmental violation	2006	EPA	\$16,500
<a href="#">COOKE AQUACULTURE USA, INC.</a>	workplace safety or health violation	2016	OSHA	\$15,713
<a href="#">OMEGA PROTEIN - REEDVILLE</a>	environmental violation	2003	EPA	\$11,000
<a href="#">OMEGA PROTEIN INC</a>	environmental violation	2005	EPA	\$9,633
<a href="#">OMEGA PROTEIN INC (Permit MS0002950) Administrative Order</a>	environmental violation	2000	EPA	\$9,375
<a href="#">COOKE AQUACULTURE USA, INC.</a>	workplace safety or health violation	2016	OSHA	\$7,856
<a href="#">OMEGA PROTEIN</a>	workplace safety or health violation	2009	OSHA	\$6,660
<a href="#">COOKE AQUACULTURE, INC. U.S.</a>	workplace safety or health violation	2012	OSHA	\$6,266
<a href="#">OMEGA PROTEIN - REEDVILLE</a>	environmental violation	2005	EPA	\$5,500
<a href="#">COOKE AQUACULTURE, INC.</a>	workplace safety or health violation	2014	OSHA	\$5,400
<a href="#">OMEGA PROTEIN</a>	workplace safety or health violation	2005	OSHA	\$5,340

The partnership that ‘Cooke’ has claimed to have established with the Jamestown S’Klallam Tribe is disappointing, but is not surprising. It is just one more instance of the lack of political will due to corporate greed to to achieve and/or continue a reckless status quo that will adversely affect the precious ecosystem of Washington state and beyond.

Additionally, with the acquisitive owners of Cooke Seafood announcing the purchase of Icicle Seafoods; creating a seafood giant expected to produce more than 275,000 metric tons of seafood and generate an

estimated USD 1.8 billion (EUR 1.58 billion) in sales annually - the agreement looked to give New Brunswick, Canada based Cooke Seafood 100 percent ownership of Icicle, including its three business units overseeing production of wild salmon and ground fish in Alaska and farmed Atlantic salmon in Washington State.

However, the environmental and workplace safety violations continue (see below and attached):

Company	Primary Offense Type	Year	Agency	Penalty Amount
<a href="#">ICICLE SEAFOODS INC - M/V NORTHERN VICTOR (USCG NO. 248959)</a>	environmental violation	2007	EPA	\$900,000
<a href="#">Icicle Seafoods Inc</a>	environmental violation	2012	EPA	\$430,000
<a href="#">Icicle Seafoods Inc.</a>	environmental violation	2012	EPA	(*) \$430,000
<a href="#">Icicle Seafoods Inc</a>	environmental violation	2003	EPA	\$85,000
<a href="#">ICICLE SEAFOODS, INC.</a>	workplace safety or health violation	2012	OSHA	\$24,000
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2009	OSHA	\$17,064
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2013	OSHA	\$15,000
<a href="#">ICICLE SEAFOODS, INC.</a>	workplace safety or health violation	2018	OSHA	\$15,000
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2013	OSHA	\$14,500
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2010	OSHA	\$12,500
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2013	OSHA	\$11,500
<a href="#">ICICLE SEAFOODS, INC.</a>	workplace safety or health violation	2018	OSHA	\$7,600
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2014	OSHA	\$6,600
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2017	OSHA	\$6,157
<a href="#">Icicle Seafoods Inc</a>	environmental violation	2010	EPA	\$5,920
<a href="#">ICICLE SEAFOODS INC</a>	workplace safety or health violation	2009	OSHA	\$5,059

It is well known that open net cage fish farms discharge significant amounts of wastewater containing nutrients, chemicals, and pharmaceuticals that impact on the surrounding environment. These aqua-farm wastewater contaminants include fish excrement, uneaten chemical-laden food, and swarms of parasites, which spread pollution and disease to ocean fish in the area and surrounding ocean.<sup>24</sup> The water flowing out of an aquaculture facility can carry with it, excessive particulates, bacteria, diseased organisms and polluting chemicals harming surrounding habitats, causing algal blooms, poisoning ocean wildlife and other severe disturbances.<sup>25</sup> Furthermore, feed and fecal matter from these facilities can deplete the dissolved oxygen concentrations around and certainly within the facilities. Even the anti-fouling agents to keep the cages and pens clean are highly toxic.<sup>26</sup> Open net-cage farming, the use of mesh nets means there is no way to prevent waste feed, which can be laced with antibiotics or pesticides, and fish feces from passing directly into the ocean. The contaminants have also been linked to elevated levels of mercury in rockfish and parasites, tumors and lesions on ground fish harvested near salmon farms, impacting a traditional food source still used by coastal communities.

In 2019, the overwhelming majority of hatchery steelhead come from “segregated” steelhead hatchery programs (those where the hatchery brood stock is genetically distinct from the wild steelhead of the system). For the most part, the fish are produced to subsidize harvest and the fish are caught in the

<sup>24</sup> Krkošek, M., Revie, C.W., Gargan, P.G., Skilbrei, O.T., Finstad, B. and Todd, C.D., 2013. Impact of parasites on salmon recruitment in the Northeast Atlantic Ocean. *Proceedings of the Royal Society of London B: Biological Sciences*, 280(1750), p.20122359

<sup>25</sup> The rising tide of fish farming, 2003. [http://wwf.panda.org/wwf\\_news/?8281/the-rising-tide-of-fish-farming](http://wwf.panda.org/wwf_news/?8281/the-rising-tide-of-fish-farming)

<sup>26</sup> Fish Farm Harms More Than It Helps, 2015. <http://www.thedailyaztec.com/70101/opinion/fish-farm-harms-more-than-it-helps/>



recreational fisheries. Fisheries managers and scientists acknowledge that these highly domesticated hatchery steelhead harm wild steelhead through both genetic and ecological interactions. There are a few “conservation hatcheries” or “integrated” programs that use local wild fish as their brood stock (see the brief discussion on the Elwha River page). The fish returning as adults are not as productive as the naturally reproducing wild steelhead. These programs also require continual “mining” of the local population for brood stock. For the most part, these programs have been unsuccessful, and a 2013 WDFW assessment recommends they be discontinued in the Lower Columbia.

This proposed permit poses a number of significant concerns for Washington’s waterways, coastal communities, wild fish stocks, and the endangered Southern Resident killer whale population. Additionally, antibiotics, diseases, parasites, excess nutrients, and other water quality concerns have been paramount with Cooke’s Atlantic salmon operations. These issues are not mitigated by simply raising a native finfish species – even if the stock is sterile/all-female – nor are they discussed exclusively by WDFW in this instance.

We only need to look to our neighbors up north in Canada<sup>27</sup> to realize that the outcome will be worse for wild salmon recovery and for those that depend on it. The science is clear. In 2012, by Fisheries and Oceans Canada (DFO) own estimates, a diseased salmon farm containing one million fish can shed as many as 650 billion viral particles an hour. And these deadly pathogens become biological booby traps for wild salmon.<sup>28</sup>

With the amount of investment and time that has been spent in restoring the Salish Sea, including the extremely high value of the endangered SRKWs -- our totem species -- and including the fish resources and ecosystem services along this waterway and shorelines, we cannot allow such unnecessary and large-scale harm to occur by moving forward with this proposed open net pen project.

Again, we request Washington State’s Department of Fish and Wildlife (WDFW) to withdraw their mitigated Determination of Non-Significance; and move to further issue a Determination of Significance, and require a full environmental assessment and environmental impact statement (EIS) under the State Environmental Policy Act (SEPA) to thoroughly address the risks of diseases, pollution, net pen collapses and further escapes, and the potential harm to the federally-listed endangered Puget Sound steelhead and Southern Resident killer whales, and the surrounding environment.

Sincerely,



Shari L. Tarantino  
President

<sup>27</sup> Davis, M. 2016. [http://www.huffingtonpost.ca/marc-davis-/fish-farming-wild-salmon\\_b\\_9361814.html](http://www.huffingtonpost.ca/marc-davis-/fish-farming-wild-salmon_b_9361814.html)

<sup>28</sup> Viral Outbreak In Cermaq Farm In Clayoquot, 2012. Morton, A. [http://alexandramorton.typepad.com/alexandra\\_morton/2012/05/viral-outbreak-in-cermaq-farm-in-clayoquot.html](http://alexandramorton.typepad.com/alexandra_morton/2012/05/viral-outbreak-in-cermaq-farm-in-clayoquot.html) <sup>10</sup> HSMI evidence detected in farmed salmon 5/2016 [http://www.fis.com/fis/worldnews/worldnews.asp?monthyear=5-2016&day=24&id=84501&l=e&country=0&special&ndb=1&df=0#st\\_refDomain=www.facebook.com&st\\_refQuery=/](http://www.fis.com/fis/worldnews/worldnews.asp?monthyear=5-2016&day=24&id=84501&l=e&country=0&special&ndb=1&df=0#st_refDomain=www.facebook.com&st_refQuery=/)