DRAFT

STATEMENT OF BASIS

COOKE AQUACULTURE PACIFIC, LLC
Orchard Rocks-Saltwater IV
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT WA0031542

This Statement of Basis explains the need to modify NPDES Permit WA0031542. This Statement of Basis serves as an amendment to the Fact Sheet and describe changes made to the permit.

I. GENERAL INFORMATION

Permittee:	Cooke Aquaculture Pacific, LLC P.O. Box 79003 Seattle, Washington 98119
Facility:	Orchard Rocks - Saltwater IV Rich Passage, South of Orchard Rocks near Bainbridge Island
Discharge Location:	Latitude: 47° 34’ 30” N / Longitude: 122° 31’ 50” W Rich Passage, Puget Sound

Estimated maximum net production per growth cycle: 5,600,000 pounds

II. PURPOSE OF MODIFICATION

Cooke Aquaculture Pacific, LLC (Cooke) applied to modify their NPDES permit to allow for the rearing of native sterile all-female rainbow trout/steelhead (*Oncorhynchus mykiss*). The term steelhead will be used to refer to the fish throughout the statement of basis. The company is transitioning from rearing non-native Atlantic salmon after the Washington State legislature banned rearing non-native finfish in marine net pens effective once Cooke’s aquatic land leases expires. Ecology received a complete application package that included permit required plans and SEPA materials on February 28, 2020.

III. PUBLIC PROCESS

Ecology public noticed the application for the modification and provided a comment period for the public to review the application materials on April 14, 2020 through June 8, 2020. We received 609 comments consisting of 385 not supporting, 171 supporting, and 17 conditionally supportive. The majority of comments related to the ecological and

disease impacts raising steelhead would pose. It is not required to respond to comments on the notice of application.

Cooke reviewed the draft permit and statement of basis for factual accuracy. Ecology corrected any errors or omissions regarding the facility's location, history, discharges, or receiving water prior to publishing this draft statement of basis for public comment. We will respond to comments submitted during the public notice of the draft permit comment period in an attachment to the statement of basis. Ecology will conduct a 45 day public comment period and hold a webinar based public hearing and workshop on the noticed draft permit.

IV. SEPA PROCESS

As an existing discharger, state law exempts the modification of Cooke's wastewater discharge permit from the SEPA process as long as the permit contains conditions no less stringent than federal effluent guidelines and/or state rules and regulations (RCW 43.21C.0383). Ecology has assessed Cooke's switch from non-native Atlantic salmon to native triploid (sterile) all-female stock of steelhead for factors that could affect the characteristics of the discharge. Regardless of species, discharges from finfish aquaculture operations may contain fish feces, uneaten fish food, disease control chemicals milled into fish feed, biofouling organisms displaced from routine net cleaning, and escaped fish.

V. EVALUATING WATER QUALITY AND SEDIMENT IMPACTS

In February 2020, Ecology received a complete application from Cooke to consider the modification to raise steelhead in order to phase out rearing Atlantic salmon. In addition to Cooke's NPDES permit application and updated NPDES permit required plans, Cooke submitted supporting information of all water quality related information that was included in their WDFW permit application and SEPA checklist. The question of ecological and disease impact from raising a native salmonid, steelhead, was conducted by WDFW through a SEPA analysis in the fall of 2019. The SEPA analysis produced a mitigated determination of non-significance and in January 2020, WDFW issued to Cooke a conditioned Marine Aquaculture Permit and indicated conditions for future transport permits with further requirements to protect native fish species.

Cooke reports in their application materials that operating the net pen facilities to raise steelhead will be similar to how Atlantic salmon are raised currently. Cooke reports that the feed used, stocking density, daily feeding requirements, and the likely feed conversion ratio will be the same or similar between Atlantic salmon and steelhead. Cooke states that the resulting maximum biomass is comparable to historic Atlantic salmon levels. Information Cooke reported from recent steelhead Chilean operations suggest an industry feed conversion factor of 1.16. Data from the Clam Bay facility indicates the feed conversion ratio for Cooke's Atlantic salmon operations in Puget Sound vary between 1.2 and 1.7 depending on age of the fish and the season. Specifically, Cooke states that the feed used for rearing steelhead in the marine net pens will be similar

to what is used for Atlantic salmon, however, food trials will be conducted to further optimize for growth, health, and flesh quality.

Cooke does not expect the escapement of steelhead to change from what is currently experienced rearing Atlantic salmon. Cooke will continue practicing single-generation stocking and vaccinating for the same bacterial and viral pathogens as they do for Atlantic salmon. They report that rainbow steelhead disease susceptibility is expected to remain the same as Atlantic salmon. They expect to use the same biosecurity methods and disease control practices. This suggests no increase in use of medicated feed so disease controlling chemical discharge should remain the same compared to rearing Atlantic salmon.

Biofouling of the stock nets should remain the same since the net mesh sizes used will also remain the same. The major difference noted in rearing steelhead is that the estimated period of time to grow to market size is shorter because the size at which harvest occurs is smaller (an average 8 pounds vs. 11 pounds) and the trout grow faster. The shorter grow-out period could lead to more frequent fallowing periods during a five year NPDES permit cycle. Cooke will be required by their WDFW Marine Aquaculture permit to maintain a fallowing period of least 42 days. Ultimately, Cooke reports that less feed will be used during a production cycle and the duration of the peak biomass period will be shorter.

Throughout the literature and from discussions with fish health and hatchery experts within the Washington Department of Fish and Wildlife, Ecology has concluded the feed used to raise steelhead is nearly the same as Atlantic salmon, so are the metabolic wastes, and rate or need for medicated feed. The major aquaculture feed companies (Skretting and EWOS) categorize feed intended for trout and salmon production as the same and varies based on lifestage. Cooke intends to adjust the feed nutrient content to maximize their product, but this is a micro-adjustment that does not change substantively the nature of the feed wastage or metabolic products. It is not expected that feed wastage will change as the same feeding techniques will be utilized (video monitored, manually controlled feeding). The metabolic waste production is not significantly different since the two species have nearly the same feed conversion ratios ranging from 1.1 to 1.7. The use of medicated feed is expected to remain the same.

VI. PERMIT MODIFICATIONS

This permit was reissued in July 2019, and included increased water and sediment quality monitoring and reporting requirements to limit discharge and protect the receiving water body and benthos. These increased monitoring and reporting requirements will remain in effect in the modified permit.

The permit is being modified to include more requirements for reporting and monitoring of stocking, harvesting, and escape, percent nitrogen in feed, and feed conversion rate. Also, the permit is modified to provide more specificity regarding requirements for how

net hygiene shall be conducted and unusual event notification shall occur. The permittee must conduct an AKART analysis, which must consist of an economic analysis of different culturing techniques for the evaluation of improved treatment of discharge and water quality and waste reduction.

DESCRIPTION OF PERMIT MODIFICATIONS

1. *Page 1:* Box insert on cover page includes the net production of fish in pounds estimated for the facility to produce during a growth cycle. This additional facility description is to provide the information put in the application into the permit for tracking production levels over permit cycles.

2. *Pages 4 & 5, Summary of Permit Report Submittals*
   - *Page 4:* Added monthly and yearly submittal requirements that are new requirements in Section S3.A, which include reporting of percentage of nitrogen in feed, feed conversion rate, number of live fish, and number of dead fish.
   - *Page 5:* Administrative correction to the submittal schedule for the Operations and Maintenance Manual, Pollution Prevention Plan, and the Fish Escape Prevention, Reporting, and Response Plan to be once per cycle and updated as necessary with changes as was specified in the reissued permit, sections S4, S8, and S9.
   - P*age 5:* Revised the submittal of a consolidated Fish Escape Prevention, Reporting, and Response Plan now specified in section S9, to replace the submittal of a separate Fish Escape Prevention Plan and a Fish Reporting and Response Plan that were identified in sections (S9 and S10).
   - *Page 5:* Revised the section that requires submittals of the Annual Fish Release, Fish Release, and Fish Release Follow-up Reports from S10 to S9.
   - P*age 5:* Added required submittals of Stocking and Harvest Plans and Reports that are new requirements listed in section S9.
   - *Page 5:* Added required submittal of an AKART Analysis Report that is a new requirement in section S.10.

3. *Page 7, S1 Discharge Limits:* The discharge limitation is updated to include fish that are permitted to be reared through Cooke's current WDFW Marine Aquaculture Permits. The release of fish from the net pens is prohibited. Furthermore, requirements for pollution prevention and fish escape prevention specify that any fish must be contained within the net pens and escape prevention, response, and reporting will be implemented in such a way to reduce the risk of a discharge and enact responses to and mitigate for any release of fish if it occurs.

4. Monitoring and reporting the accidental release of fish has been increased for improved tracking. Permit requirements are integrated into three sections and now include monthly and annual reporting of the estimated number of individual live fish and the estimated number of dead fish.

Page 14, S3.A.1 and Page 15, S3.A.3.a: Monthly discharge monitoring reporting must include:

- Estimated number of live fish
- Number of dead fish collected or observed

Page 15, S3.B.2: The submittal of the Annual Monitoring Report must include:

- Estimated number of live fish
- Number of dead fish collected or observed

Page 27, S9, V and W, Additional monitoring and reporting of stocking and harvest include plans to be submitted prior to each activity. Stocking and harvest reports are to be submitted 30 days after each activity occurs with dates stocking and harvesting occurred and the estimates of the numbers of fish stocked or harvested and any complications. The permittee must report immediately any release of fish.

5. New parameters will be reported for future analysis of nitrogen loading to the receiving water. The permit requires monthly and annual reporting of the percentage of nitrogen the feed contains and the feed conversion rate. The added requirements are specified in section S3.A. Discharge Monitoring Reports under Monthly Monitoring and Annual Monitoring.
   Page 14, S3.A.1: Monthly discharge monitoring reporting must now include:
   - Percentage of nitrogen in feed
   - Feed conversion ratio

   Page 15, S3.B.2: The submittal of the Annual Monitoring Report must include:
   - Percentage of nitrogen in feed
   - Feed conversion ratio

6. To prevent a release of fish and reduce the discharge of biofouling organisms, net hygiene cleaning requirements were further identified and required to be implemented. The requirements specify that the Permittee must prevent the excessive accumulation of marine growth on the stock nets through the use of the net hygiene protocol developed cooperatively with Washington State Department of Natural Resources (DNR). In accordance with DNR protocol, the Permittee shall maintain documentation of net cleaning activities and effectiveness of net washing, and shall provide verification of the efficacy of in situ net cleaning to Ecology upon request.
   - *Page 20, S4.A.3.i O&M Manual Submittal Requirements:* To prevent excessive accumulation of marine growth of the stock nets, the permit specifies that the DNR protocol developed cooperatively is to be followed.
   - *Page 26, S9.J: Fish Escape Prevention, Reporting, and Response Plan requirements:* To prevent excessive accumulation of marine growth of the stock nets, the permit specifies that the DNR protocol developed cooperatively is to be followed.

7. *Page 22, S7, Net Pen Structural Integrity Assessment Report:* Added RCW code to indicate where the requirement can be further reviewed and located for further clarity.

8. The notification of an unusual event has been added as a requirement under pollution prevention and fish escape prevention.
    - *Page 24, S8.B.13, Pollution Prevention Plan*
    - *Page 25, S9.F, Fish Escape Prevention, Reporting and Response Plan.*
    - *Page 43 and 44, Appendix G, State Agency Contact Information for Emergencies and Unusual Events*

    These requirements add specificity to when the permittee is to notify Ecology and the associated regulating state agencies of events that have the potential to lead to or include major repairs or mechanical or structural issues that may produce a spill or release. The permit further defines an "unusual event" at the marine net pen facility as an uncommon event or abnormal situation that is not an active fish escape or a spill or release of toxic substances. An "unusual event" can create or lead to an increased potential for accidental fish escapement, structural failure of the net pen array, or spill.

9. *Page 25, S9 Fish Escape Prevention, Reporting, and Response Plan:* The former required Fish Escape Prevention Plan and the Fish Escape Reporting and Response Plan were consolidated into one plan, now called the Fish Escape Prevention, Reporting, and Response Plan. The required plan is included in section S9 and all requirements remain and now can be submitted as one document.

10. *Page 27, S10 AKART Analysis Report:* The previous permit did not include the requirement for an analysis for all known, available, and reasonable methods of treatment or AKART because the rearing of Atlantic salmon was to be terminated by the end of the permit cycle due to the banning of all non-native finfish aquaculture by 2022. With the conversion to a native finfish, the industry will continue its aquaculture business for the foreseeable future. Therefore an AKART analysis must be conducted by the permittee. Requirement S10 specifies that an AKART analysis must be conducted and the analysis must include an economic and treatment analysis of the range of culturing techniques, including but not limited to all known in-water and uplands systems for the purpose of improved water quality of the effluent, reduced discharge, and less feed waste. Analysis shall also include the evaluation of best management practices and technology improvements to in-water systems that will lead to improved water quality of the effluent, reduced discharge, and less feed waste. The report must be submitted with the application for the renewal of this permit as required in S6.

VII. References

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