ENVIRONMENTAL ASSESSMENT SUMMARY AND FINDING OF NO SIGNIFICANT IMPACT

FOR PROPOSED NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL MARINE FISHERIES SERVICE MANCHESTER RESEARCH STATION SEAWATER SYSTEM REPLACEMENT AND CAMPUS ADDITION PROJECT

Environmental Assessment Summary

PURPOSE AND NEED

The National Oceanic and Atmospheric Administration's (NOAA) Northwest Fisheries Science Center (NWFSC) operates its Manchester Research Station (MRS) on the western shoreline of Clam Bay in Puget Sound, approximately one mile north of Manchester, Washington. The MRS property, located at 7305 Beach Drive East, Port Orchard, WA 98366, is the NWFSC's premier marine culture and experimental research station, developing state-of-the-art technology for salmonid and marine fish culture. However, with the expansion of marine aquaculture under directives of NOAA and National Marine Fisheries Service (NMFS) Strategic Plans as well as the Executive Order 13921 Promoting American Seafood Competitiveness and Economic Growth, the facilities necessary for marine aquaculture research need to increase. The current seawater distribution system at the site is only minimally able to meet the current needs of the MRS and is not sufficient for anticipated future use. The pumping, filtering and distribution systems are a mixture of components that were installed in an ad-hoc fashion, and do not provide a coherent, reliable system to meet current or future needs.

The Proposed Action would provide adequate research and wet laboratory facilities and a more reliable and efficient seawater filtration, distribution and disposal system to serve existing and future marine aquaculture research operations and to reduce operational and maintenance costs.

PROPOSED ACTION

The Proposed Action at the MRS involves the installation of a new seawater treatment, distribution system and head tank to replace the existing system, and the construction of up to four additional single or two-story buildings to house hatcheries, laboratories and offices at the site. The proposed replacement seawater processing, distribution, and depuration system would be designed to deliver processed water to a common head tank capable of supplying existing and future NOAA fisheries and aquaculture operations within the MRS. The proposed design is also designed to reduce overall seawater system operation and maintenance costs and to increase reliability.

Alternatives Considered

Preferred Alternative

The Preferred Alternative would include the following proposed seawater treatment and distribution system components:

- Raw water (RW) pipelines—Two 16-inch diameter HDPE pipelines (350 linear feet).
- Filter/UV system—Approximately 50 x 68 feet two-tiered concrete pad with screens and filters on upper level (50 x 44 feet) and ultraviolet (UV) disinfection equipment on lower level (50 x 24 feet). A gravel pad would be constructed to the east (approximately 30 feet wide) and north (approximately 20 feet wide) of the concrete pad, to facilitate crane access to allow for filter swap-out and other maintenance activities. An approximately 15-foot-wide gravel driveway would provide access to the pad from the existing dirt road to the north. Aboveground components would extend up to approximately 5 feet above the pad.
- Treated water (TW) pipelines—Two 16-inch diameter TW HDPE pipelines (425 linear feet) and two 24-inch diameter TW pipelines (175 linear feet).
- Aeration head tank—Approximately 24 x 14 feet concrete tank extending approximately 14 feet above grade, with aerators extending up to 6 feet above the tank. A 3.5-foot steel perimeter guard rail would be installed around the top of the tank. The existing gravel driveway would be extended to the northern and western sides of the tank, and a 3-foot-wide gravel pathway would be along the eastern and southern sides.
- Distribution valve manifold—Approximately 14 x 8 feet concrete pad with above-ground valves and meters extending up to approximately 5 feet above grade.
- Trunk line pipelines—Five HDPE pipelines of 8- or 10-inches diameter, with branch lines of 6-, 4-, or 3- inches for building connections. Approximately 2,500 linear feet.
- Overflow (OF) pipelines—HDPE pipelines of 12-inch diameter. Existing building and tank waste drains would tie into the new OF pipe. Primary OF is approximately 1,200 linear feet. Secondary OF is approximately 250 linear feet.

Proposed components of the Preferred Alternative would be installed within an approximately 11-acre portion of the NOAA property and all proposed actions will be upland of the higher high water level (or 11 feet North American Vertical Datum of 1988 [NAVD88]). The Preferred Alternative would also include the construction of up to four new buildings on the site to accommodate expanded program requirements. Proposed campus additions include:

- Building A, Recirculated Aquatic System (RAS) Hatcheries (9,000 square feet)—Hatcheries, laboratories, storage, and office space serving the Environmental and Fisheries Science Division (EFS) Physiology and Feeds and Nutrition programs.
- Building B, Laboratories and Offices (6,000 square feet)—Laboratories and office space serving both EFS and Conservation Biology (CB) Divisions.

- Building C, OA, Physiology, Ecological Toxicity (Ecotox) Hatcheries (3,000 square feet)—Hatcheries and storage areas serving both EFS and CB Divisions.
- Building D, Feed Development (1,500 square feet)—Laboratories and storage areas for research and development into algae-based fish food pellets.

The four proposed buildings would be connected to existing on-site services including electricity, potable water, sanitary sewer, and communications. To accommodate the proposed new buildings, the following changes to the internal site circulation and parking areas would be required:

- Two existing driveway connections between the main roadway and northeast corner of the main parking lot would be removed and a new entrance-only driveway would be constructed to the north of Building 9.
- An existing no-exit driveway between buildings 18 and 19 would be extended as an exit-only connection from the main parking lot to the main roadway.
- Additional building accesses/driveways from the main roadway would be provided to serve proposed Buildings B and C, existing Building 9, proposed Building D, and proposed Building A.
- Three additional parking spaces would be provided, near Building A.

Construction of the Preferred Alternative would occur in phases, with the replacement seawater treatment and distribution system being installed during the first year of construction, and proposed buildings and associated hardscaping and landscaping changes occurring in the second year. Construction staging is anticipated to be confined to the immediate vicinity of the component footprints and other previously disturbed areas of the site (e.g., the main parking lot) to the extent feasible and are not anticipated to require substantial additional vegetation clearance beyond that required for construction.

Following completion of construction activities, operations of the facility would include the operation and maintenance of the seawater treatment and distribution system. The Preferred Alternative would result in all seawater from the system discharging from the main (ozone treatment) seawater outfall, with the other outfalls being abandoned in place. The velocity of discharge from the main outfall may increase slightly compared to existing conditions, from approximately 4.9 feet per second to approximately 5.6 feet per second, due to the increased volume. The new seawater treatment and distribution system would not require any additional staffing, deliveries, or other changes to site operations. The proposed site improvements would allow an increase of approximately 6 additional permanent staff at the MRS, as well as up to ten additional temporary (daily or weekly) visitors on an occasional basis. Deliveries to the site would increase slightly, relative to the size of the new facilities, but the types of deliveries are not anticipated to change substantially.

Action Alternative 1

Under Action Alternative 1, the proposed replacement seawater treatment and distribution system would be installed at the site, exactly as described above for the Preferred Alternative. However, no new buildings would be constructed, and no changes to the on-site roadways or landscaping would occur.

No-Action Alternative

The No-Action Alternative for the Proposed Action would be to leave the existing facilities and seawater treatment and distribution system in place and continue site operations as currently undertaken. There would be no substantial new research undertaken at the site and no new buildings would be constructed. Under the No-Action Alternative, the existing seawater treatment and distribution system is anticipated to eventually fail, which would require NOAA to cease all seawater-based research at the research station; therefore, this alternative would not meet the purpose and need for the project.

Alternatives Considered and Rejected

The proposed seawater treatment and distribution system is intended to replace and upgrade the existing seawater system serving existing research activities at the MRS. Therefore, any consideration of an alternative site for the seawater treatment and distribution system would also require relocation of all the existing research facilities from the existing site to a new site, which would be substantially more expensive, time consuming, and disruptive to NWFSC's mission.

None of the other NWFSC laboratories in the Puget Sound area have existing seawater systems that could accommodate the relocation of existing Manchester research facilities or anticipated future research needs. The Manchester site already contains substantial research facilities and an existing seawater intake and outfalls. Any alternative locations would need to be constructed from scratch, which would substantially increase associated costs, schedule, and disruption to existing research undertakings.

Different types of filtration and aeration equipment were considered during design of the seawater treatment and distribution system. The UV system utilizes equipment that NOAA already owns so no alternatives were evaluated for this equipment. Other filtration systems were rejected because of one or more of the following:

- Lack of operational experience with the relatively new equipment technology compared with the filters selected.
- The filtration equipment would have required too much backwash water to make operations feasible.
- The costs were too high.

Other aeration systems were rejected because they would have required more maintenance than the equipment selected and would have cost more.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

NOAA prepared an Environmental Assessment (EA) analyzing the proposed action in conformance with procedural requirements of the National Environmental Policy Act (NEPA). The document adheres to requirements of NOAA Administrative Order 216-6A, Environmental Review Procedures for Implementing the NEPA (amended April 2016) and the Companion Manual for NOAA Administrative Order 216-6A.

Based on an evaluation of the proposed action's effect on the human environment, it was determined that no significant impacts would result.

The EA analyzed the following topics:

- Land Use
- Geological Resources
- Climate Change and Sea Level Rise
- Air Quality
- Water Resources and Hydrological Processes
- Recreational Resources
- Cultural Resources
- Flora and Fauna
- Wetlands
- Floodplains
- Coastal Zone Management
- Farmlands
- Noise
- Transportation
- Utilities and Solid Waste
- Visual Resources
- Hazardous Materials
- Public Services
- Environmental Justice
- Cumulative Effects

No anticipated environmental impacts were identified in relation to the No-Action Alternative. Table 1 summarizes the anticipated environmental impacts to environmental resources identified in the Final EA for each action alternative and any mitigation measures required to support this Finding of No Significant Impact.

Table 1 Summary of Environmental Impacts and Mitigation Measures

Resources	Impact of Preferred Alternative	Impact of Action Alternative 1	Summary of Best Management Practices, Mitigation Measures, and Regulatory Compliance
Land Use	No impact	No impact	No mitigation required.
Geological Resources	Minor	Minor	**BMPs** for stormwater and erosion control. **Compliance** with OSHA excavation standards.
Climate Change and Sea Level Rise	Minor	Minor	**BMPs** for reducing equipment emissions during construction.
Air Quality	Minor	Minor	**BMPs** for dust control and reducing equipment emissions during construction. **Compliance** with Puget Sound Clean Air Agency rules and regulations pertaining to emission standards for construction equipment.
Water Resources and Hydrological Processes	Minor	Minor	**BMPs** for stormwater and erosion control during construction, in accordance with a Stormwater Pollution Prevention Plan (SWPPP) prepared in compliance with EPA's Construction Stormwater General Permit. **Compliance** with Section 438 of the Energy Independence and Security Act. **MM 4.5-1: Maintain Pre-development Hydrology** **MM 4.17-1: Environmental Media Management Plan**
Recreational Resources	Minor	Minor	**BMPs** for dust control during construction. **MM 4.13-2: Preconstruction Coordination and Notification**
Cultural Resources	Negligible	Negligible	**BMPs** and standard protocols for inadvertent discoveries, if encountered, would be followed in consultation with DAHP.
Flora and Fauna	Minor	Minor	**BMPs** for stormwater and erosion control during construction. **MM 4.8-1: Noxious Weed Control** **MM 4.8-2: Pre-Construction Surveys for Nesting Birds**
Wetlands	No Impact	No Impact	**BMPs** for stormwater and erosion control and for wetland avoidance during construction. **MM 4.9-1: Wetland Delineation and Avoidance**
Floodplains	No Impact	No Impact	**BMPs** for stormwater and erosion control during construction.

Resources	Impact of Preferred Alternative	Impact of Action Alternative 1	Summary of Best Management Practices, Mitigation Measures, and Regulatory Compliance
Coastal Zone Management	Negligible	Negligible	No mitigation required.
Farmlands	No Impact	No Impact	No mitigation required.
Noise	Moderate	Moderate	**BMPs** for noise reduction during construction. **MM 4.13-1: Restrict construction hours** **MM 4.13-2: Preconstruction coordination and notification**
Transportation	Minor	Minor	**BMPs** for temporary traffic control during construction. **MM 4.14-1: Utilize a designated haul route.** **MM 4.14-2: Preconstruction coordination and notification.** **MM 4.14-3: Develop roadway closure and traffic detour plan.**
Utilities and Solid Waste	Negligible	Negligible	No mitigation required.
Visual Resources	Negligible	Negligible	No mitigation required.
Hazardous Materials	Minor to Moderate	Minor to Moderate	**BMPs** for stormwater and erosion control during construction. **MM 4.17-1: Environmental Media Management Plan** **MM 4.17-2: Implement Institutional Controls** **MM 4.17-2: Site-Specific Health and Safety Plan**
Public Services	Negligible	Negligible	No mitigation required.
Environmental Justice	No Impact	No Impact	No mitigation required.
Cumulative Effects	Negligible	Negligible	No mitigation required.

PUBLIC REVIEW

NOAA published a Notice of Availability (NOA) of the Draft EA on the NOAA website, and also in the classified section of the Kitsap Sun newspaper on November 22, 2022 and November 27, 2022. This Draft EA was made available for public comment over the minimum 30-day period from November 22, 2022 to December 22, 2022. Comments received during the public review period have been considered and incorporated into the EA, as appropriate.

AGENCY AND TRIBAL CONSULTATION

NOAA coordinated with federal, state, and local agencies with jurisdiction by law or special expertise over the Proposed Action to inform the issues to be addressed in the EA. NOAA also initiated contact with federally recognized tribes on October 11, 2022 and invited further comment on the Proposed Action. Responses have been considered and incorporated into the EA, as appropriate.

Finding of No Significant Impact

The Council on Environmental Quality (CEQ) Regulations state that the determination of significance using an analysis of effects requires examination of both context and intensity, and lists ten criteria for intensity (40 CFR 1508.27). In addition, NOAA Administrative Order (NAO) 216-6A, Section 6.01(b) 1 – 11, provides eleven criteria, the same ten as the CEQ Regulations and one additional for determining whether the impacts of a proposed action are significant. Each criterion is discussed below with respect to the proposed action and considered individually as well as in combination with the others.

1. *Can the proposed action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?*

No. The Preferred Action is not expected to result in a significant beneficial or adverse effect. The EA analyzes associated environmental consequences of the Preferred Alternative based on established standards and criteria. Analysis for each of the following topics and resource areas were undertaken: Land Use, Geological Resources, Climate Change and Sea Level Rise, Air Quality, Water Resources and Hydrological Processes, Recreational Resources, Cultural Resources, Flora and Fauna, Wetlands, Floodplains, Coastal Zone Management, Farmlands, Noise, Transportation, Utilities and Solid Waste, Visual Resources, Hazardous Materials, Public Services, Environmental Justice, and Cumulative Effects. No effects were found to be significant.

2. *Can the proposed action reasonably be expected to significantly affect public health or safety?*

No. Public health and safety effects are not expected to be significant. NOAA will ensure that the Preferred Alternative will be constructed in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, and additional mitigation measures would be implemented to reduce potential impacts associated with disturbance of the existing soil and groundwater contamination that is present in portions of the site. The existing institutional controls in place at the property would be adhered to and maintained. Typical construction BMPs and/or mitigation measures would be implemented to reduce noise, air emissions, and traffic-related impacts during construction such that they would not significantly affect public health and safety.

3. *Can the proposed action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic resources or prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?*

No. Adequate mitigation measures are required for anticipated effects to unique characteristics of the geographic area. NOAA will also implement BMPs and comply with federal laws and applicable regulations designed to reduce impacts to the environment. There are no known

historic resources, prime farmlands or wild and scenic rivers in proximity to the project site. The proposed action would avoid any disturbance below the higher high tide line of the coastal zone, or within wetlands or floodplains.

4. *Are the proposed action's effects on the quality of the human environment likely to be highly controversial?*

The Preferred Alternative would involve the installation of a new seawater treatment, distribution system and head tank to replace the existing system at the MRS, and the construction of up to four additional single or two-story buildings to house additional hatcheries, laboratories and offices at the site. No adverse effects to the human environment would result that are expected to be highly controversial.

5. *Are the proposed action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?*

No. The anticipated effects of the Preferred and Alternative Actions on the human environment were evaluated in the EA based on 100% design plans (for the seawater system) and conceptual design (for the campus addition) assuming reasonable, worst-case conditions.

6. *Can the proposed action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?*

No. The Preferred Alternative consists of the installation of a new seawater treatment and distribution system and the construction of up to four new buildings. The Preferred Alternative is clearly defined and limited in scope and extent. It would neither be a catalyst or precedent for other future actions by NOAA or others that would result in significant effects, nor would it influence a future action under consideration. Future actions at the project site would be determined through separate planning processes.

7. *Is the proposed action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?*

No. The Preferred Alternative is not reliant upon or connected to other actions, nor is it relied upon for the occurrence of other actions. For each of the subject areas analyzed in the EA, the contribution of the Preferred Alternative to a potentially cumulatively significant impact is not considerable, provided the recommended mitigation measures and best management practices are implemented. Therefore, the Preferred Alternative will not result in a significant cumulative impact to the human environment.

8. *Can the proposed action reasonably be expected to adversely affect districts, sites highways, structures, or objects listed in or eligible for listing in the National Register of*

Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

No. The Preferred Alternative is not expected to result in significant adverse impacts to NHRP-listed or eligible historic resources or result in the loss or destruction of significant scientific, cultural, or historical resources during construction and operation. A cultural resource evaluation was prepared for the site and was sent to the State Historic Preservation Officer (SHPO) on November 17, 2022, along with a letter requesting concurrence with the recommended finding of no historic properties affected. DAHP concurred with the finding of no historic properties affected on March 22, 2023.

9. *Can the proposed action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?*

No. The Preferred Alternative is not expected to affect endangered or threated species. Based on information from USFWS Information Planning and Consultation (IPaC), three federally listed terrestrial wildlife species (and one candidate species) were identified as potentially affected by activities in this location, but suitable habitat for these species is not present:

- Marbled murrelet (*Brachyramphus marmoratus*), ESA Threatened, State Endangered
- Streaked horned lark (*Eremophila alpestris strigata*), ESA Threatened, State Endangered
- Yellow-billed cuckoo (*Coccyzus americanus*), ESA Threatened, State Endangered
- Monarch butterfly (*Danaus plexippus*), candidate for ESA listing

There are no known plant, fish, avian, or terrestrial wildlife species or designated critical habitats for these resources that are protected by the ESA known to occur in the project area. Mitigation measures such as pre-construction surveys for nesting birds have been identified to ensure potential impacts are less than significant during construction.

10. *Can the proposed action reasonably be expected to threaten a violation of federal, state or local law or requirements imposed for environmental protection?*

No. The effect of the Preferred Alternative on the human environment has been analyzed relative to applicable Federal, state and local environmental laws or regulations. No regulatory violations or other significant environmental effects are expected to result provided that mitigation measures recommended in EA are implemented.

11. *Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?*

No. The majority of the proposed action involves construction in previously disturbed areas with limited ground disturbance in undisturbed areas. The proposed action also includes mitigation measures to prevent the transport, release, propagation or spread of noxious weeds.

Determination

In view of the information present in this document and the analysis contained in the supporting NOAA Environmental Assessment for its proposed action, it is hereby determined that the undertaking of the Manchester Research Station Seawater System Replacement and Campus Additional Project will not significantly impact the quality of the human environment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement for this action is not necessary.

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