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## PROJECT DESCRIPTION

### UNIVERSITY OF ALASKA SOUTHEAST SITKA MARICULTURE

#### 1. PURPOSE

The University of Alaska Southeast (UAS) is expanding its mariculture program, and UAS has selected to house the program in a pontoon-based hatchery facility, that is currently in Ketchikan, and will be moved to, and moored against the UAS campus on Japonski Island, in the Sitka Channel waterway. Significantly, this site allows the design to utilize moorage struts, anchored to the shoreline, instead of driven piles. This approach reduces the costs of permitting and construction, while reducing the project duration as no permanent construction will occur in the tidelands.

The area of Japonski Island that includes the University is a designated National Historical Landmark. To ensure alignment with this designation, the proposed site and concept design were presented to the Department of Natural Resources, Alaska State Historic Preservation Office (SHPO), Office of History and Archeology (OHA) and the National Parks Service, Alaska Region. Both agencies agreed that the project was not detrimental to the historic designation. The proposed design has minimal impact to the land area with only some concrete cutting for utilities and abutments on the shoreline to support the mooring struts for the pontoon.

#### 2. NEED

UAS is establishing this pontoon-based facility to support the growth of the Applied Fisheries Mariculture Program to meet the demand for farmers and fisheries technicians in the expanding mariculture industry. Classes within the program are currently held off-campus, and the establishment of this site will provide the facilities needed for proper instruction directly on the campus in a convenient, and central location for students, staff, and faculty.

#### 3. LOCATION

| Latitude  | Longitude  | USGS Quad    |
|-----------|------------|--------------|
| 57.0528 N | 135.3505 W | Sitka A-5 SE |

| Section(s) | Township | Range | Meridian     |
|------------|----------|-------|--------------|
| 35         | 055S     | 063E  | Copper River |

| Tide Station                          | Station Datums (elevation, ft.) |       |      |
|---------------------------------------|---------------------------------|-------|------|
|                                       | MLLW                            | HTL   | MHW  |
| NOAA station 9451600<br>Sitka, Alaska | 0'                              | 12.8' | 9.2' |

#### 4. DRIVING INSTRUCTIONS

The project site is located at the University of Alaska Southeast campus, at 1332 Seward Avenue, Sitka. To reach the project site from Sitka Rocky Gutierrez Airport, head southeast on Airport Road, turn left on Old Airport Road, and immediately turn right back onto Airport Road. Follow the street as it turns into Harbor Drive and proceed for

0.3 miles. Turn left onto Seward Avenue, and after 0.3 miles, the site will be on the right, before Mt. Edgecombe High School.

## 5. ADJACENT LAND OWNERSHIP

The project site property, and properties adjacent to/adjoining the water body are listed in Table 1 below.

**Table 1: Adjacent Properties**

| Parcel No.                                                         | Owner                              | Owner Address                                          |
|--------------------------------------------------------------------|------------------------------------|--------------------------------------------------------|
| 1-9100-000 (Project Site)                                          | University of Alaska Southeast     | 1332 Seward Street<br>Sitka, AK 99835                  |
| 1-9206-000<br>1-9200-000<br>1-9207-000                             | State of Alaska, Dept of Education | P.O. Box 110500-20<br>Juneau, AK 99811-0500            |
| 1-9062-000<br>1-9060-000                                           | State of Alaska, Dept of Education | 801 W 10 <sup>th</sup> Street #200<br>Juneau, AK 99801 |
| 1-9400-000<br>1-9412-000<br>1-9416-000<br>1-9422-000<br>1-9406-000 | Office of the Controller SEARHC    | 3100 Channel Drive #300<br>Juneau, AK 99801            |
| 1-9208-000<br>1-5078-000<br>1-5408-000                             | City and Borough of Sitka          | 100 Lincoln Street<br>Sitka, AK 99835                  |
| 1-6835-000                                                         | Romar Holdings, LLC                | 208 Lake Street, Ste. B<br>Sitka, AK 99835             |
| 1-6838-000<br>1-6840-000                                           | Fisherman's Quay, LLC              | P.O. Box 807<br>Sisters, Oregon 97759                  |
| 1-6843-000                                                         | Christopher Balovich               | P.O. Box 6133<br>Sitka, AK 99835                       |

| Parcel No. | Owner                         | Owner Address                                          |
|------------|-------------------------------|--------------------------------------------------------|
| 1-6845-000 | MBH Properties, LLC           | P.O. Box 232368<br>Encinitas, California 92023         |
| 1-5081-000 | SeaFood Producers Cooperative | 2875 Roeder Ave, Ste 2<br>Bellingham, Washington 98225 |
| 1-5079-000 | Harbor Enterprises, Inc       | P.O Box 389<br>Seward, AK 99664                        |

## 6. DESCRIPTION

The proposed pontoon facility will utilize a hybrid strut/anchor system to support the pontoon at the proposed location and provide access to the facility from the existing parking lot in the uplands. The entire footprint is approximately 380 feet by 240 feet. Steel struts have been sized to hold the pontoon in position with assistance from an anchor system on the outside edge of the pontoon. This system will alleviate the need for mooring piles. The struts will utilize a wire rope bracing system to transfer lateral loads applied to the facility to the concrete foundations. The tension only brace system will bring the lateral loads of the system to the concrete foundations. The struts also provide support for an access gangway to the facility from the uplands.

The fiberglass access gangway will utilize the steel strut for support. The fiberglass grating and guardrail will bear on steel beams connected to the strut. The grating will be ADA compliant, and the 80' long access gangway will meet ADA standards for gangways. A landing ramp on the float will provide the required ramp slope to meet ADA access to the pontoon deck. The gangway has guardrails with intermediate rails on both sides. The concrete abutments will provide support for, and resist loads from the strut framing system. Shallow bedrock is anticipated at the site, which will require rock/soil anchors to resist the pontoon strut forces applied to the concrete foundations above the HTL at the shoreline. The two strut foundations will utilize hollow core anchors to resist tension and overturning forces. The anchors will be advanced through the overburden without a casing, limiting the amount of installation work and time.

The HDPE wave attenuators will utilize anchor and chain as a mooring for the structures on the exposed sides of the pontoon. The 270 linear foot attenuators will utilize a 48-inch diameter pipe with a 5-foot vertical keel plate to reduce the wave effects at the facility. A total of 14 steel Danforth-style anchors will be used, weighing approximately 1,500-2,000 pounds and measuring 2 feet by 3 feet, each. The anchors will be attached using 2-inch diameter stud link chains with a length limiting the chain contact with the mudline. The continuous vertical force of the chain weight will assist with ballasting the attenuator and prevent dragging on the seafloor.

### 6.1 MOBILIZATION

Project materials will likely originate from Seattle, WA, or Southeast Alaska, and will likely utilize the existing scheduled barge service to Sitka.

This project does not anticipate the use of a crane barge or material barge, and the work will be land-based. However, there will be a need for a small craft to set mooring anchors. This small craft will likely be a local landing

craft with a small davit arm large enough to lift the anticipated anchors and associated chain. The Contractor is anticipated to mobilize to the site using existing public access and transportation.

## 6.2 CONCRETE FOUNDATIONS

The Contractor will begin the on-site work and preparation with cast-in-place concrete foundation construction in the uplands, above MHW. This work will require some localized excavation, so the new foundations are as close to the existing bedrock as possible. Rock/Soil anchors will be installed at the base of the foundations to resist uplift and lateral loads. No in-water work is anticipated at this step.

## 6.3 STEEL STRUTS

After foundation work has been completed, the steel struts which are anticipated to be prefabricated off-site will be delivered to the project. The Contractor will utilize a shore-based crane, assistance from temporary flexi-floats, and likely a landing craft to maneuver the strut into position and connect the strut to the foundations. The steel struts can be installed prior to, or after, the concrete pontoon.

## 6.4 CONCRETE PONTOON

The existing concrete pontoon structure, approximately 130 feet by 40 feet, will be pulled into position using a small vessel such as a tug or landing craft. Once in position, the pontoon will be either temporarily moored while waiting for the steel struts to be installed, or will be connected to the struts already installed. The two strut foundations will utilize hollow core anchors to resist tension and overturning forces. The anchors will be advanced through the overburden without a casing, limiting the amount of installation work and time.

## 6.5 UTILITIES

Once the pontoon is in position, water, sewer, and electrical utilities will be routed to the pontoon. These utilities are anticipated to be routed along the seabed. Utilities will be connected to the existing utility stub outs on the pontoon.

## 6.6 WAVE ATTENUATOR

The HDPE wave attenuators will utilize anchor and chain as a mooring for the structures on the exposed sides of the pontoon. The 270 linear foot attenuators will utilize a 48-inch diameter pipe with a 5-foot vertical keel plate to reduce the wave effects at the facility. A total of 14 steel Danforth-style anchors will be used, weighing approximately 1,500-2,000 pounds and measuring 2 feet by 3 feet, each. The anchors will be attached using 2-inch diameter stud link chains with a length limiting the chain contact with the mudline. The continuous vertical force of the chain weight will assist with ballasting the attenuator and prevent dragging on the seafloor. Anchors are anticipated to be placed using a landing craft. The United States Coast Guard may require a light on the wave booms; a PATON form (private aid to navigation) will be completed and submitted following design completion.

## 6.7 DEMOBILIZATION

Refuse and excess materials from the project will be reclaimed, recycled, or disposed of as necessary in accordance with applicable regulations. Shore-based project equipment will be demobilized according to the contractor's needs and means. Landing crafts used for anchor setting will demobilize back to Sitka Harbor.

## 6.8 FACILITY OPERATIONS

When construction is completed, the pontoon will house the UAS Hatchery, providing training for Applied Fisheries students in mariculture research and hatchery/nursery methods. The facility will produce and provide seed supply for shellfish and seaweed farms throughout Southeast Alaska. UAS is permitted to work with multiple species, including, but not limited to:

- Pacific oyster (*Crassostrea gigas*)
- Pacific geoduck (*Panopea generosa*)
- Basket cockles (*Clinocardium nuttalli*)
- Giant red sea cucumber (*Parastichopus californicus*)
- Pinto abalone (*Haliotis kamtschatkana*)
- Littleneck clams (*Protothaca staminea*)
- Seaweed species
- Non-kelp aquatic plant species

Refer to the UAS Hatchery Basic Management Plan 2024-2028 for more information on species to be raised, and methods to be used.

The pontoon has indoor and outdoor space, with the outdoor deck space available for pumps, tanks, and outside culture systems. The indoor space has two floors; the main floor has approximately 18 feet by 55 feet of area for culture systems, and the second floor has a small office, a wet lab, an algae flask room, and auxiliary laboratory space.

Equipment to be utilized includes, but is not limited to: microalgae production systems, microalgae feeding systems, tanks for broodstock, larvae, and wellers; and various bags and tubes. A plastic, centrifugal flow Pacer pump will bring in heated sea water from a suction of 30 ft depth with a variable speed 3 HP electric, 230v 3-phase motor. Refer to the Basic Management Plan for more detail.

## 7. SCHEDULE AND DURATION:

The project is anticipated to begin approximately in May 2025 and extend through December 2026. The majority of the work will be conducted off-site, with fabrication of structural steel and procurement of anchors and anchor chains. On-site construction is anticipated to take three months with concrete foundations case in the uplands, moving the steel strut frames into positions, and connection of the concrete pontoon to the steel struts. Utility connections are anticipated to be approximately one month of work. No in-water pile driving or drilling is anticipated.

## 8. BEST MANAGEMENT PRACTICES

Construction will use the following best management practices (BMPs) to prevent impacts to waters of the U.S. (WOTUS):

- The pontoon will be maintained in a manner that does not introduce any pollutants or debris into the harbor or cause a migration barrier for fish.
- Fuels, lubricants, and other hazardous substances used during construction will not be stored below the high tide line/ordinary high water mark.
- Review of best available data on migratory bird nesting will be conducted prior to construction to prevent impacts to protected bird species during clearing (if applicable). If possible, clearing will be performed outside of seasonal nesting windows.
- The following BMPs will be utilized to prevent stormwater run-off during construction:
  - Projects impacting more than one acre will have a Stormwater Pollution Prevention Plan (SWPPP) on file with the State.
  - Staking of sensitive areas (if applicable) prior to construction to identify areas to be avoided, including wetlands without planned development.

- A Stabilized Construction Entrance (a temporary stone-stabilized pad located at points of vehicular ingress and egress on a construction site will mitigate sedimentation and stormwater pollution.).
- Installation of silt fences consisting of a geotextile fabric stretched across and attached to supporting posts, providing a temporary barrier to sediment and reducing the runoff velocities of sheet flow from non-vegetated surfaces.
- Use of weed-free straw wattles to intercept sheet flow and detain small amounts of sediment from disturbed areas.
- Establishment of a vegetative cover on disturbed areas by seeding with appropriate seed mixes supported with fertilizer and mulch to protect bare soil and bind the soil with roots, thereby providing long-term erosion control.

## 9. MITIGATION

### 9.1 AVOIDANCE

The project avoids impacts to WOTUS by mooring a pontoon facility to the existing UAS campus on Japonski Island, rather than creating and installing a permanent structure within WOTUS. The project also does not involve any type of pile driving, dredging, or filling of tidal waters.

### 9.2 MINIMIZATION

Incorporation of the proposed BMPs listed above will avoid and minimize impacts to WOTUS to the extent possible.

The project is designed to create a non-permanent structure, with minimal construction, and a short work-period, limiting the extent of in-water work.

### 9.3 COMPENSATION

The project results in a very small loss of WOTUS. The loss does not impact any important habitats, and the project is being constructed in a previously disturbed area. As such, no compensatory mitigation is proposed.

## 10. PROTECTED SPECIES CONSIDERATIONS

The proposed project area is within the habitat range of various Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA)-listed species, as outlined in Table 2 below. Humpback Whales and the Western stock of Steller Sea Lions have designated critical habitats, but they are not located near the project site.

**Table 2. Protected species anticipated within the project area.**

| Species                                                    | Stock                       | Listing Status <sup>1</sup>     |
|------------------------------------------------------------|-----------------------------|---------------------------------|
| <b>Humpback Whale</b><br>( <i>Megaptera novaeangliae</i> ) | Hawai'i DPS                 | MMPA protected<br>non-strategic |
| <b>Gray Whale</b><br>( <i>Eschrichtius robustus</i> )      | Eastern North Pacific Stock | MMPA protected<br>non-strategic |

<sup>1</sup> Species listed under the ESA are also considered “depleted” under the MMPA and classified as strategic stocks. (16 U.S.C. § 1362)

| Species                                                                     | Stock                              | Listing Status <sup>1</sup>     |
|-----------------------------------------------------------------------------|------------------------------------|---------------------------------|
| <b>Sperm Whale</b><br>( <i>Physeter macrocephalus</i> )                     | North Pacific Stock                | ESA endangered                  |
| <b>Fin Whale</b><br>( <i>Balaenoptera physalus</i> )                        | Northeast Pacific Stock            | ESA endangered                  |
| <b>North Pacific Right Whale</b><br>( <i>Eubalaena japonica</i> )           | Eastern North Pacific Stock        | ESA endangered                  |
| <b>Cuvier's Beaked Whale</b><br>( <i>Ziphius cavirostris</i> )              | Alaska Stock                       | MMPA protected<br>non-strategic |
| <b>Dall's Porpoise</b><br>( <i>Phocoenoides dalli</i> )                     | Alaska Stock                       | MMPA protected<br>non-strategic |
| <b>Harbor Porpoise</b><br>( <i>Phocoena phocoena</i> )                      | Yakutat/SEAK Offshore Waters Stock | MMPA protected<br>non-strategic |
| <b>Harbor Seal</b><br>( <i>Phoca vitulina</i> )                             | Sitka/Chatham Strait Stock         | MMPA protected<br>non-strategic |
| <b>Killer Whale</b><br>( <i>Orcinus orca</i> )                              | ENP West Coast Transient           | MMPA protected<br>non-strategic |
|                                                                             | ENP Northern Resident              |                                 |
|                                                                             | ENP Alaska Resident                |                                 |
| <b>Minke Whale</b><br>( <i>Balaenoptera acutorostrata</i> )                 | Alaska Stock                       | MMPA protected<br>non-strategic |
| <b>Northern Fur Seal</b><br>( <i>Callorhinus ursinus</i> )                  | Eastern Pacific Stock              | MMPA depleted<br>strategic      |
| <b>Pacific White-Sided Dolphin</b><br>( <i>Lagenorhynchus obliquidens</i> ) | North Pacific Stock                | MMPA protected<br>non-strategic |
| <b>Short-Tailed Albatross</b><br>( <i>Phoebastria albatrus</i> )            | N/A                                | ESA endangered                  |
| <b>Steller Sea Lion</b><br>( <i>Eumetopias jubatus</i> )                    | Western DPS                        | ESA endangered                  |
|                                                                             | Eastern DPS                        | MMPA protected<br>non-strategic |
| <b>Sunflower Sea Star</b><br>( <i>Pycnopodia helianthoides</i> )            | N/A                                | ESA proposed threatened         |

## 10.1 BALD EAGLES

The US Fish and Wildlife Service (USFWS) Bald Eagle Nest Atlas displays a number of known eagle nests near the project site. US FWS has a disclaimer that their Nest Atlas is not intended to take the place of a survey to determine the presence, absence, status, or exact location of a current eagle nest. The data from the Atlas can be used to provide an estimate of any nests in the area. For a concrete determination, a nest survey must occur.

The Nest Atlas found one nest located on Japonski Island (nest ID: 02.12315.126), the island where the project is scheduled to take place. The Atlas also reported 9 other nests within 1.5 miles of the project site, see Table 3 for

more info. Considering the disclaimer from USFWS, this data should indicate that there is likely a bald eagle presence in the project area, and a survey should be conducted if serious disturbances should occur from the project construction.

To avoid take of migratory birds, and Bald Eagles, the project will utilize the timing window suggested by the US FWS. For the Southeast region, the FWS recommends avoiding vegetation clearing during April 15 through July 15. Project work will utilize this window to avoid Eagle take, and to comply with the Migratory Bird Treaty Act.

**Table 3: Documented Bald Eagle Nests**

| Nest ID      | Identification Date | Tree Species | Latitude | Longitude  |
|--------------|---------------------|--------------|----------|------------|
| 02.12315.126 | 08/20/2002          | Hemlock      | 57.05056 | -135.36145 |
| 02.12315.031 | 07/20/2011          | Spruce       | 57.04255 | -135.36955 |
| 02.12315.135 | 07/20/2011          | Spruce       | 57.04933 | -135.38561 |
| 02.12315.132 | 07/20/2011          | Spruce       | 57.04632 | -135.39145 |
| 02.12315.136 | 06/29/2010          | Spruce       | 57.04479 | -135.33942 |
| 02.12315.122 | 06/29/2010          | Spruce       | 57.04528 | -135.34024 |
| 02.12315.123 | 06/29/2010          | Spruce       | 57.04349 | -135.33642 |
| 02.12315.134 | 06/29/2010          | Spruce       | 57.0448  | -135.37912 |
| 02.12315.131 | 07/15/2005          | Spruce       | 57.05203 | -135.33566 |
| 02.12315.130 | 07/15/2005          | Spruce       | 57.05056 | -135.36145 |