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Staff: M. Kraemer-A
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Hearing Date: 11/14/19

STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-18-0035**
Applicant:	**Melissa Merryman**
Agent:	Stein Coriell, SHN Consulting Engineers & Geologists
Location:	100 Moonstone Beach Road, approximately 2.5 miles south of the City of Trinidad, Humboldt County (APN 514-191-003).
Project Description:	(1) Construct a new onsite wastewater treatment and disposal system to serve the Moonstone Beach House and Restaurant; (2) remove the existing septic tanks currently serving the Beach House and Restaurant; and (3) remove major vegetation to accommodate construction.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

The applicant proposes to construct a new onsite wastewater treatment and disposal system (OWTS) to serve two existing commercial structures: the Moonstone Beach House, a commercial structure constructed in the 1960s that includes a kitchen and bathroom and is available for rental as a special event venue, and the Moonstone Grill Restaurant, which also was

constructed in the 1960s. In general, the proposed new OWTS consists of a series of buried tanks and vaults at the Beach House and restaurant, interconnecting wastewater effluent transmission lines, a commercial-size pre-treatment system for the treatment of commercial waste, and a pressurized sewage disposal field for the treated wastewater from both systems.

The existing Beach House and restaurant are located on an approximately 9-acre beachfront and bluff-top lot adjacent to Moonstone Beach, a public beach, and the Little River, which flows into the Pacific Ocean at Moonstone Beach (Exhibit 3). Moonstone Beach is one of the most popular beaches in Humboldt County, consisting of an 11-acre beach park managed by the County and a contiguous approximately 2-acre beach area within the boundaries of a public easement on the applicant's property that is held by the Trinidad Coastal Land Trust and cooperatively managed/ maintained by the land trust and the applicant.

Construction of the new OWTS will require the temporary closure of approximately 15 parking spaces on the inland side of the gravel parking lot adjacent to the beach and approximately 12 parking spaces on the northeastern side of the upper paved parking lot for storage of construction equipment, staging, and OWTS improvement work (Exhibit 4, page 6). The applicant has indicated that the construction duration for the OWTS at the Beach House is expected to be no longer than 14 days. Construction of the OWTS components at the restaurant may take slightly longer but not more than 30 days.

The principal purpose of the project is to protect the water quality of the Little River and Pacific Ocean by minimizing the adverse effects of wastewater discharges associated with the existing substandard wastewater systems on the property. Both existing systems have a history of failure, according to the County, and neither is built to modern standards. The proposed new OWTS will improve the sewage treatment at the Beach House and restaurant facilities by providing upgraded wastewater treatment measures. Staff recommends **Special Conditions 3 through 5** to assure that the new OWTS will be properly installed and maintained over its lifespan to prevent sewage discharges as well as to ensure that the construction work itself will not result in other water quality impacts. With these recommended conditions, staff believes that the biological productivity and quality of coastal waters will be maintained consistent with Sections 30230 and 30231 of the Coastal Act.

To ensure that no additional parking is displaced beyond the minimum needed to construct the OWTS as proposed, staff recommends **Special Condition 4-B(iii)**. This condition requires that prior to commencement of construction, the limits of the construction work and staging areas shall be delineated with temporary fencing or flagging, limiting the potential areas affected by construction to only those areas identified on the proposed construction staging and work area site plan. Because construction may adversely impact public access use by creating (1) conflicts between construction vehicles and members of the public driving, bicycling, or walking along narrow Moonstone Beach Road and within the lower parking lot to access the beach, and (2) noise, dust, and possibly fumes and odors that could adversely affect the public's enjoyment of the use of the beach, staff further recommends **Special Condition 2**, which states, in part, that (a) construction work shall be completed no later than March 31, 2020 (i.e., the end of the low/winter season), and (b) construction activities, including the proposed temporary parking closure of the lower parking area, shall not exceed 30 days total.

Staff believes that the project, as conditioned, includes all feasible mitigation measures necessary to find the project consistent with the Chapter 3 policies of the Coastal Act.

The motion to adopt the staff recommendation of approval with special conditions is on page 5.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-18-0035 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**: The permit is not valid, and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**: If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**: Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**: The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land: These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Humboldt County Approval.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall submit for the review and approval of the Executive Director, a copy of a permit issued by Humboldt County Division of Environmental Health (County DEH) for the onsite wastewater treatment and disposal system, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by the County DEH. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

2. **Project Timing**. By acceptance of this permit, the applicant agrees to the following:
   A. The onsite wastewater treatment and disposal system (OWTS) authorized by this permit to serve the Beach House and restaurant shall be fully installed, operational, all construction work completed, and all construction materials, equipment, and construction debris completely removed from the site by March 31, 2020; and
   B. Construction activities associated with the development and installation of portions of the authorized OWTS that will serve the restaurant, including, but not limited to, the new septic, recirculation, and pump tanks, pre-treatment system, pressurized distribution field, and proposed temporary parking closure of portions of the upper parking lot, shall not exceed thirty (30) days; and
   C. Construction activities associated with the development and installation of portions of the authorized OWTS that will serve the Beach House, including, but not limited to, the new septic tank and pump tank near the Beach House and the proposed temporary parking closure of portions of the inland side of the lower parking lot, shall not exceed fourteen (14) days.
   D. The Executive Director may grant an extension of the 30-day and 14-day work windows to up to an additional 30 days for good cause upon written request (e.g., wet weather events interrupting construction work), but in no case shall the extension result in an extension of the timing of completion of all work beyond March 31, 2020.

3. **OWTS Operation and Maintenance Standards and Requirements**. The permittee shall undertake regular inspections and maintenance of the OWTS, including the AdvanTex AX100 treatment system and its system components, as required by the Humboldt County Department of Environmental Health (County DEH) and as recommended in the AdvanTex O&M Manual (Exhibit 7). Inspections and maintenance shall be performed by a Qualified Professional, or Qualified Service Provider, as defined in Humboldt County Code §616-2, for the duration of the operation of the existing commercial facilities on the site (Beach House and restaurant), consistent with the inspection, sampling, and maintenance schedules of the

AdvanTex O&M Manual and consistent with County DEH requirements. In addition, the permittee shall comply with the additional requirements below:

A. The water use of the Beach House and Restaurant shall be limited by the permittee to stay within the system's design flow rate of 1,200 gallons per day to prevent overloading of the system. A totalizing flow meter shall be installed on the discharge of the pump to the dispersal field to allow for monitoring daily flow. The meter shall be installed in a separate utility box outside of the pump chamber per the Engineer's specifications; and

B. All inspection and maintenance reports, including any flow meter logs and reports, shall be submitted to County DEH as required by the County. All inspection and maintenance records for the inspection and maintenance events outlined in subsections (A) through (F) above shall be maintained by the permittee and made available to the Commission's Executive Director upon request.

4. **Construction Standards, Restrictions, and Responsibilities.** The permittee shall employ construction-related "best management practices" (BMPs) to protect water quality, public access, and adjacent sensitive habitat areas. The permittee shall ensure that all on-site workers and contractors understand and agree to observe the standards and limitations for work outlined in this permit and in the detailed project description included as part of the application submittal and as revised by these conditions.

   A. The following proposed BMPs shall be implemented, consistent with the additional requirements specified in subsection (B) below:

      (i) install sediment and runoff control BMPs on the site prior to site disturbance;

      (ii) maintain BMPs in place during the course of construction work to ensure that no visible sediment leaves the site;

      (iii) use tracking control BMPs to minimize sediment encroaching onto public roadways;

      (iv) minimize the disturbance footprint to the extent practical during construction;

      (v) use appropriate stockpile management BMPs;

      (vi) stabilize disturbed areas as soon as possible following construction;

      (vii) use containment, response, and clean-up BMPs at drilling entry and exit points including (a) straw or hay bales; (b) silt fencing; (c) plastic sheeting; (d) hand tools including shovels, pails, push brooms, and squeegees; (e) pump and hose; and (f) mud storage tanks;

      (viii) implement standard operating procedure clean-up measures associated with low-pressure horizontal directional drilling, including (a) removal of any leaked drilling fluid around drill holes by carefully scraping the ground surface to bare topsoil with shovels, with care taken to minimize the loss of topsoil and sod; (b) disposal of all recovered drilling fluid offsite at an approved disposal facility; (c) collection in containers recovered materials for temporary storage prior to removal from the site; and (d) removal of all BMPs and containment structures from the site following completion of construction; and

      (ix) restrict construction staging and work areas to only those areas identified on the proposed construction staging and work area site plan mark-up submitted on September 25, 2019 (Exhibit 4, page 6).

   B. The following additional requirements also apply to the authorized construction work:

(i) Timing of Construction: Development authorized by this permit shall only occur during the time period limitations specified in **Special Condition 2**;

(ii) Archaeological Resources: Construction work and scheduling shall adhere to the requirements of **Special Condition 6** for the protection of archaeological resources;

(iii) Delineating Construction Work Areas: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the limits of the construction work and staging areas shall be delineated with temporary fencing or flagging, limiting the potential areas affected by construction to only those areas identified on the proposed construction staging and work area site plan mark-up submitted on September 25, 2019 (Exhibit 4, page 6). All construction work and staging shall be limited to those areas, and no other areas shall be used for construction activities or be subject to parking closure without an amendment to this coastal development permit;

(iv) Water Quality Protection BMPs: No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters. During construction, development shall minimize erosion and sedimentation, the discharge of other potential pollutants resulting from construction activities, and stormwater and non-stormwater runoff through the use of the following temporary BMPs:

(a) Appropriate erosion control BMPs may include mulch, soil binders, blankets or mats to prevent soil from being eroded by water or wind;

(b) Appropriate sediment control BMPs may include fiber rolls, silt fences, or straw bales to trap and remove eroded sediment from runoff;

(c) Appropriate tracking control BMPs may include stabilizing construction entrance/exit or street sweeping to prevent vehicles leaving the construction area from tracking sediment off-site;

(v) Plastic Netting Prohibition: To minimize wildlife entanglement and plastic debris pollution, the use of temporary rolled erosion and sediment control products with plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers used in fiber rolls, erosion control blankets, and mulch control netting) is prohibited. Any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design with movable joints between the horizontal and vertical twines;

(vi) Stockpile BMPs: All on-site stockpiles of construction debris and soil or other construction-related materials shall be covered and contained whenever there is a potential for rain to prevent polluted water runoff from the site;

(vii) Trash and Debris: Any and all debris resulting from construction activities shall be removed from the project site and disposed of properly, consistent with **Special Condition 5**. During construction, all trash shall be properly contained, removed from the work site on a regular basis, and properly disposed of to avoid contamination of habitat during demolition and construction activities;

(viii) Equipment BMPs: Equipment fueling and maintenance shall occur off-site if feasible. Any fueling and maintenance of equipment conducted on site shall take place at a designated area located at least 50 feet from coastal waters, drainage courses, and storm drain inlets. The fueling and maintenance area shall be designed to fully contain any spills of fuel, oil, or other contaminants;

(ix) Minimize Land Disturbance and Soil Compaction: Construction shall minimize land disturbance (e.g., clearing, grading, and cut-and-fill) and soil compaction to avoid potential increased erosion and sedimentation and to retain the natural stormwater infiltration capacity of the soil;

(x) Vegetation Removal: Major vegetation removal shall only occur during the time period limitations specified in **Special Condition 2**. Construction shall minimize the damage or removal of vegetation (including trees, native vegetation, and root structures) to achieve water quality benefits (such as transpiration, vegetative interception, pollutant uptake, shading of waterways, and erosion control) and to protect archaeological resources. To minimize ground disturbance, root balls of trees to be removed shall be left in place unless the root ball would obstruct the layout of the authorized OWTS as required by Special Condition 6;

(xi) Revegetation: Any seed mixes used for seeding disturbed areas following construction shall not include any species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California. No plant species listed as a "noxious weed" by the governments of the State of California or the United States shall be utilized within the bounds of the property;

(xii) Straw Mulch: Only certified weed-free straw mulch shall be used for erosion, sediment, and runoff control to avoid the inadvertent introduction of nonnative plant species to surrounding environmentally sensitive areas.

5. **Debris Disposal Plan.**

A. PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, a final plan for the disposal of all construction debris, including, but not limited to, soil and vegetative spoils that are expected to be generated by the authorized work.

(i) The plan shall demonstrate that upon completion of construction, all construction materials, excess soils, excess vegetative spoils, recovered drilling fluid storage tanks, and any other debris, waste, and other excess material shall be lawfully disposed of at an authorized disposal site(s) capable of receiving such materials.

(ii) The plan shall include, at a minimum, the following:

(a) A description of how the stockpiled and excess materials will be removed from the construction site and identification of all disposal sites that will be used;

(b) A schedule for the removal of all construction materials, excess sediments, vegetative spoils, and any other debris and waste associated with the authorized work; and

(c) Identification of the authorized disposal sites and evidence that each disposal location is authorized and capable of accepting the material.

B. The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit, or the Executive Director provides a written determination that no amendment is legally required for any proposed minor deviations.

6. **Protection of Archaeological Resources.**
   A. AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF GROUND-DISTURBING ACTIVITIES, including tree removal, the permittee shall notify the Yurok Tribe, Trinidad Rancheria, and the Tsurai Ancestral Society of the construction schedule and arrange for both (i) tribal representative(s) and (ii) a registered professional archaeologist to be present to observe ground-disturbing activities. The monitors shall have experience monitoring for Yurok tribal cultural resources during excavation projects, should be competent to identify significant resource types, and should be aware of recommended tribal procedures for the inadvertent discovery of human remains.
   B. The development authorized under this Coastal Development Permit (CDP) shall be constructed in a manner that minimizes ground disturbance to the maximum extent feasible. The root ball of each tree to be removed shall be left in place, unless the root ball would obstruct the layout of the authorized OWTS.
   C. If an area of cultural deposits is discovered during construction, all construction work shall cease and shall not recommence except as provided in subsection (d) hereof, and the permittee shall retain a qualified cultural resource specialist to analyze the significance of the find.
   D. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit a supplementary archaeological plan for the review and approval of the Executive Director, in consultation with tribal representatives from the Yurok Tribe, Trinidad Rancheria, and Tsurai Ancestral Society.
      (i) If the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, construction may recommence after this determination is made by the Executive Director.
      (ii) If the Executive Director approves the Supplementary Archaeological Plan but determines that the changes therein are not *de minimis*, construction may not recommence until after an amendment to this permit is approved by the Commission.

7. **Future Development Restriction**. This permit is only for the development described in Coastal Development Permit Application No. (CDP) 1-18-0035, including, but not limited to, the authorized onsite wastewater treatment and disposal system (OWTS). The following future development restrictions apply:
   a. Pursuant to Title 14 California Code of Regulations (CCR) section 13253(b)(6), the exemptions otherwise provided in Public Resources Code (PRC) §30610(b) shall not apply to the development governed by the CDP 1-18-0035. Accordingly, any future improvements to the structures authorized by this permit shall require an amendment to CDP 1-18-0035 from the Commission or shall require an additional CDP from the Commission or from the applicable certified local government.
   b. In addition, an amendment to CDP 1-18-0035 from the Commission or an additional CDP from the Commission or from the applicable certified local government shall be required for any repair or maintenance identified as requiring a permit in PRC §30610(d) and Title 14 CCR §13252(a)-(b).

8. **Conformance with Approved Plans.** The new OWTS authorized by this permit shall be constructed per the manufacturer's recommendations and specifications and consistent with the final plans prepared by SHN Consulting Engineers & Geologists, Inc. dated March 2019 submitted to the Commission on July 30, 2019. All authorized development shall be located in the locations proposed in the permit application, which are no closer to the bluff edge than 30 feet, consistent with the measurements in the SHN plans. The Permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed minor deviations.

9. **No Future Bluff or Shoreline Protective Device**
   A. By acceptance of Coastal Development Permit (CDP) No. 1-18-0035, the applicant agrees, on behalf of herself and all successors and assigns, that no bluff or shoreline protective device(s) shall ever be constructed to protect the development approved pursuant to CDP 1-18-0035, including, but not limited to, the OWTS for the Beach House and restaurant, including in the event that the development is threatened with damage or destruction from waves, erosion, storm conditions, liquefaction, bluff retreat, landslides, or other coastal hazards in the future, and as may be exacerbated by sea level rise. By acceptance of this Permit, the applicant hereby waives, on behalf of herself and all successors and assigns, any rights to construct such devices that may exist under applicable law.
   B. By acceptance of this Permit, the applicant further agrees, on behalf of herself and all successors and assigns, that the landowner shall remove the development authorized by this Permit, if the County or any other government agency with legal jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the OWTS structures or the Beach House or restaurant are currently and permanently unsafe for occupancy or use due to coastal hazards, and that there are no measures that could make the OWTS structures, Beach House, or restaurant structures suitable for occupancy or use without the use of bluff or shoreline protective devices. If any portion of the development authorized by this permit at any time encroaches onto public property, the permittee shall either remove the encroaching portion of the development or apply to retain it. Any application to retain it must include proof of permission from the owner of the public property. The permittee shall obtain a CDP for removal of approved development, unless the Executive Director provides a written determination that no CDP is legally required.
   C. In the event that the edge of the bluff-top recedes to a point where any portion of the subsurface OWTS becomes exposed, but no government agency has ordered that the Beach House and/or restaurant and/or OWTS structures not be occupied or used, a geotechnical investigation shall be prepared by a licensed coastal engineer and geologist, retained by the permittee, that addresses whether any portions of the OWTS improvements are threatened by coastal hazards. The report shall identify all those immediate or potential future measures that could stabilize the OWTS improvements without bluff or shoreline protective device(s), including but not limited to, removal or relocation of portions of the OWTS improvements. The report shall be submitted to the Executive Director and the appropriate local government officials. If the geotechnical

investigation concludes that any portion of the OWTS improvements is unsafe for operation or use, the permittee shall, within 90 days of submitting the investigation, apply for a coastal development permit amendment to remedy the hazard.

D. Prior to removal/relocation, the permittee shall submit two copies of a Removal/ Relocation Plan to the Executive Director for the review and written approval. The Removal/Relocation Plan shall clearly describe the manner in which such development is to be removed/relocated and the affected area restored so as to best protect coastal resources, including the Pacific Ocean. In the event that portions of the development fall to the bluffs or ocean or river before they are removed/relocated, the landowner shall remove all recoverable debris associated with the development from the bluffs and ocean/river and lawfully dispose of the material in an approved disposal site. Such removal shall require a CDP.

10. **Assumption of Risk, Waiver of Liability, and Indemnity Agreement**. By acceptance of this permit, the applicant acknowledges and agrees (a) that the site may be subject to hazards, including, but not limited to, waves, storms, flooding, landslide, bluff retreat, erosion, and earth movement, many of which will worsen with future sea level rise; (b) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (c) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (d) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

11. **Deed Restriction Recordation of Permit Conditions**. PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (a) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (b) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. BACKGROUND AND PROJECT DESCRIPTION

The applicant, Melissa Merryman, proposes to construct a new onsite wastewater treatment and disposal system (OWTS) to serve two existing commercial structures: the Moonstone Beach House and the Moonstone Grill Restaurant. In general, the proposed new OWTS consists of a series of buried tanks and vaults at the Beach House and restaurant, interconnecting wastewater effluent transmission lines, a commercial-size pre-treatment system for the treatment of commercial waste, and a pressurized sewage disposal field for the treated wastewater from both systems. The development associated with the proposed new OWTS is described in detail below.

The existing Beach House and restaurant are located on an approximately 9-acre beachfront and bluff-top lot at 100 Moonstone Beach Road approximately 2.5 miles south of the City of Trinidad in Humboldt County (APN 514-191-003) (Exhibits 1-2). The Merryman family has owned the subject property since the early 1900's, and, according to the applicant, the two existing structures were constructed in the 1960s.

The structures are adjacent to Moonstone Beach, a public beach, and the Little River, which flows into the ocean at Moonstone Beach (Exhibit 3). The property includes both beach and bluff-top areas, and topographic elevations on the site range from sea-level to over 60 feet (NAVD88) at the site of the proposed new sewage disposal field.

Moonstone Beach Road, a paved, narrow (mostly one-lane), steep, relatively short County road bisects the upper, northeastern portion of the property. The small portion of the parcel north of the road is developed with a residential use (Exhibit 3). Moonstone Beach Road originates at the south end of Scenic Drive near the entrance ramp to southbound Highway 101 and dead ends at the beach adjacent to the Beach House. Moonstone Beach Road provides access both to Moonstone Beach and to the applicant's property, including to the Beach House and restaurant.

Most of Moonstone Beach, which includes sandy beach and scattered boulders, is public land managed by Humboldt County. An approximately 2-acre portion of the sandy beach, boulders, and gravel parking lot seaward of the Beach House is within the boundaries of a public easement on the Merryman property that is held by the Trinidad Coastal Land Trust (a local non-profit organization) under a perpetual and exclusive public access easement granted to the land trust by the Merryman family in 1979. The Merryman family and the land trust cooperatively maintain the portion of the beach and gravel parking area covered by the public easement (see Public Access Finding IV-G below for more detail).

Moonstone Beach House

The Beach House is located at the foot of Moonstone Beach Road, a public road, adjacent to the public beach and land trust easement area. The structure is on the inland (eastern) side of the existing gravel parking lot at an elevation of approximately 19 feet (NAVD88). The Beach House is a special event venue that includes a kitchen and bathroom currently served by a failing septic system that includes an underground septic tank on the inland side of the existing gravel parking lot and an associated disposal line that extends seaward under the lot.

On May 18, 2017, the Humboldt County Department of Environmental Health (County DEH) documented surfacing sewage overflowing onto the ground near the beach from the failing

OWTS. The County issued a Notice of Violation to the applicant on June 9, 2017 declaring the failing OWTS a public nuisance pursuant to County Code and a violation of the State Health and Safety Code. The County DEH directed the applicant to complete the following corrective actions: (1) immediately cap the pipe that exits the septic tank and leads to the disposal line to prevent wastewater exit; (2) contract with a septic tank pumper to pump the tank as needed when contents reach maximum 90% tank capacity; and (3) obtain permits from County DEH and the Coastal Commission for a replacement OWTS for the Beach House and restaurant. In addition, as the failed OWTS had been serving an unpermitted recreational vehicle (RV)[1] that had been placed in the gravel lot near the Beach House for year-round residential occupancy (by a property caretaker) without the benefit of CDP authorization, the County also directed the applicant to remove the caretaker RV from the site.

The applicant capped the pipe and removed the caretaker RV from the site as directed,[2] and County DEH authorized the applicant to continue to operate the Beach House for events, provided that the existing septic tank was used as a sewage vault and pumped regularly by a septic tank pumping company as needed when contents reach maximum 90% tank capacity. According to the County DEH's violation notice, the vaulting and pumping arrangement is authorized only as a temporary measure until the new OWTS is installed. The County DEH will withhold issuing its non-discretionary permit for the installation of the new OWTS until after the Commission's permit has been issued. Since 2017, the applicant has been vaulting sewage in the existing septic tank and having the tank pumped on a regular basis by a commercial septic tank pumping service. The contracted pumping service/licensed waste hauler disposes of the wastewater from the Beach House facility into the municipal wastewater treatment system operated by the McKinleyville Community Services District (approximately 9 miles south of the subject site). The solid waste from the Beach House facility is trucked to the Anderson Landfill for disposal (approximately 162 miles east of the subject site).

Proposed Improvements to the OWTS at the Beach House

The proposed development for the Beach House OWTS includes the following:

(1) Install, below ground, the following:

a) a new 1,500-gallon, two-compartment, traffic-rated, pre-cast concrete septic tank (approx. 10 ft. long by 6 ft. wide by 6 ft. deep), buried at least 2 feet below ground surface (as measured from the top of the tank) at a location approximately 30 feet south of the Beach House between the gravel parking lot and the base of the bluff;

b) a new 750-gallon, one-compartment, traffic-rated, pre-cast concrete pump vault (approx. 8 ft. long by 4 ft. wide by 6 ft. deep), buried at least 2 feet below ground surface (as measured from the top of the tank) and adjacent to the new septic tank; and

[1] The subject of both County and CCC violation cases.

[2] This CDP application originally proposed to connect the caretaker RV to the proposed new OWTS. In July of 2019, prior to Commission staff filing the CDP application as complete, the applicant withdrew that project element from the proposed application. In September of 2018, the caretaker RV was removed from the lower parking lot.

c) a new approximately 200-foot-long, 2-inch-diameter, HDPE wastewater effluent transmission line, buried approximately 10 feet below ground surface, extending from the new Beach House septic tanks southward along the inland side of the parking lot to the southeast corner of the parking lot before turning upslope to the proposed new pre-treatment unit to be installed adjacent to the restaurant (described in further detail below);

(2) Remove and dispose of the existing septic tank and backfill the tank cavity with compacted engineered fill derived from the sandy material excavated from the new septic tank and pump tank excavations described above;

(3) Abandon in place the existing disposal field; and

(4) Temporarily displace approximately 15 parking spaces on the inland side of the gravel parking lot for use for storing construction equipment, staging, and OWTS improvement work (Exhibit 4, page 6). It should be noted that the gravel parking lot has no marked parking stalls or stripes, as discussed in more detail in the Public Access Finding below, so the estimate on parking availability is approximate.

Waste discharge from the Beach House would flow by gravity to the new 1,500-gallon septic tank. Effluent from the tank then would flow by gravity to the new 750-gallon pump vault. From there, the effluent would be pumped through the new 200-foot-long wastewater effluent transmission line up the bluff to a new 3,000-gallon septic tank adjacent to the restaurant (described below, along with the remaining components of the OWTS). Ultimately, the effluent would be pumped to a new sewage disposal field in the hillside area northeast of the restaurant parking lot as described below. Project plans are attached as Exhibit 4.

Installation of the tanks at the Beach House would involve excavating approximately 40 cubic yards of material. Approximately 200 square feet of existing lawn area near the Beach House would be disturbed. Some of the excavated material from the removal of the existing septic tank would be used to backfill the tank cavity. Installation of the wastewater effluent transmission line would involve low-pressure directional drilling or displacement drilling, thereby minimizing ground disturbance and vegetation removal. Up to three pilot holes, approximately 4 inches in diameter each, would be needed for the drilling: one near the proposed new pump tank, one near the base of the bluff below the restaurant, and one on the bluff adjacent to the proposed new 3,000-gallon restaurant septic tank described below.

Moonstone Grill Restaurant

The restaurant is located on the upper bluff portion of the 9-acre property at an elevation of approximately 45 feet (NAVD88) within approximately 10 feet of the bluff edge. County DEH has informed the applicant that the existing OWTS serving the restaurant facility is not designed or built to modern standards for adequate wastewater treatment. The existing OWTS consists of a septic tank and grease interceptor tank on the east (inland) side of the restaurant, and an existing disposal field located on the bluff face seaward of the restaurant above the Little River, which is listed by the State Water Board as an impaired water body due to high levels of fecal bacteria. Because County DEH is requiring the new sewage disposal field for the Beach House to be located on the bluff-top portion of the lot near the restaurant, County DEH requested that the

applicant concurrently upgrade the restaurant's existing substandard OWTS with new tanks, pre-treatment, and a new disposal system.

Proposed Improvements to the OWTS at the Restaurant

The proposed development for the restaurant OWTS includes the following:

(1) Install, below ground, the following:

a) a new 3,000-gallon, two-compartment, non-traffic-rated, concrete or fiberglass septic tank (approx. 17 ft. long by 6 ft. wide by 7 ft. deep), buried at least 2 feet below ground surface (as measured from the top of the tank) along the northeast side of the restaurant;

b) a new 1,200-gallon, one-compartment, traffic-rated, pre-cast concrete recirculation tank (approx. 8 ft. long by 6 ft. wide by 6 ft. deep), buried at least 2 feet below ground surface, just north of the northeast corner of the restaurant;

c) a new 750-gallon, one-compartment, traffic-rated, pre-cast concrete pump vault (approx. 8 ft. long by 4 ft. wide by 6 ft. deep), buried at least 2 feet below ground surface adjacent to the recirculation tank;

d) approximately 160 linear feet of 2-inch-diameter HDPE or PVC transmission line, buried approximately 10 feet below ground surface, for the pumping of treated wastewater effluent extending northeast from the new pump vault on the bluff to the proposed new primary disposal field described below on the hillside northeast of the restaurant parking lot;

e) a new sewage disposal field/pressurized distribution system for treated wastewater effluent from both the Beach House and restaurant consisting of ten 45-foot-long, 1.25-inch PVC lateral lines spaced 8 feet apart on center and buried approximate 18 inches below ground surface across an approximately 5,000-square-foot disposal field area;

(2) Install, above ground in the vicinity of the recirculation tank and pump vault off the northwest corner of the restaurant, a new Orenco[3] Advantex AX100 wastewater treatment unit consisting of a fiberglass basin (approx. 16 ft. long by 8 ft. wide by 4 ft. tall) packed with engineered textile treatment filters;

(3) Abandon in place the existing disposal field in the bluff; and

(4) Temporarily displace approximately 12 parking spaces on the northeastern side of the upper paved parking lot for use for storing construction equipment, staging, and OWTS improvement work (Exhibit 4, page 6). There are no marked parking stalls or stripes in this portion of the upper parking lot.

Waste discharge from the restaurant would flow by gravity to the new 3,000-gallon two-compartment septic tank. The existing grease interceptor at the restaurant would remain and be plumbed into the new septic tank. Effluent from the new septic tank (which would also include effluent pumped from the Beach House, as described above) then would flow by gravity to the

[3] Orenco Systems, Inc. is an Oregon-based company that manufactures OWTS components.

new 1,200-gallon recirculation tank. From there, the effluent would be pumped to the new Orenco pre-treatment unit. Following treatment, the treated effluent would be pumped to the new 750-gallon pump vault. Effluent from the pump vault then would be pumped through the new 160-foot-long transmission line to be discharged to the pressurized distribution field.

Installation of the various tanks at the restaurant would involve excavating approximately 40 cubic yards of material and disturbing approximately 1,100 square feet of lawn and landscaped area adjacent to the Beach House and restaurant. Major vegetation removal of natural vegetation would be required for the installation of the disposal field as well as removal of landscaping vegetation for the installation of the OWTS components adjacent to the restaurant. The following trees and ornamental plants would be removed: (1) two nonnative Monterey cypress trees (>5-foot dbh); (2) eight cherry laurel ornamentals (1-foot dbh); (3) 15 native cascara (*Frangula purshiana*) trees/shrubs (4-inch dbh); and (4) one Hollywood juniper ornamental (18-inches dbh). Only low ground impact equipment would be used for vegetation clearing, trench excavation, and backfilling within the disposal field area, and the native soil between trenches would remain undisturbed.

If possible, the existing septic tank at the restaurant would remain in place to be used as a secondary grease trap. Leaving it in place would require sufficient space to reroute the current waste line exiting the building around the existing tank and to the new 3,000-gallon septic tank. If not, the existing septic tank would be removed for disposal. The tank cavity would be backfilled with compacted engineered fill derived from the new tank excavations described above.

Construction duration for the entire proposed project is expected to be a maximum of 30 days.

B. STANDARD OF REVIEW

Although Humboldt County has a certified local coastal program (LCP), the property is located in a non-certified area (area of deferred certification, or ADC) that includes all of the privately owned lands, other than lands owned by the Trinidad Coastal Land Trust, located west of Scenic Drive, west of Stagecoach Road, and west of Patricks Point Drive (where each is the first public road paralleling the sea), and along the route of the Sixth Avenue Trail in the Westhaven area. In denying certification for this area of the Trinidad Area Plan (LUP) in 1982, the Commission suggested that the Plan's policies regarding the protection of the public's right of access where acquired through use (i.e. potential prescriptive rights) be modified to conform to the natural resource, hazard, and public access policies of the Coastal Act. The County did not accept the suggested modifications, and the geographic area became an ADC. As a consequence, the Commission retains CDP jurisdiction over the site, and the standard of review for issuance of a CDP is whether the development is consistent with the Chapter 3 policies of the Coastal Act.

C. OTHER AGENCY APPROVALS

The proposed project requires no other agency approvals other than an installation permit from the County DEH. As discussed above, the County DEH will withhold issuing its permit for the installation of the new OWTS until after the Commission's permit has been issued.

D. PERMIT AUTHORITY

Section 30610 of the Coastal Act provides for exemptions from coastal development permitting (CDP) requirements for various types of development. Included among these exemptions are exemptions for certain repair or maintenance activities and exemptions for certain additions to structures. Coastal Act §30610(d) generally exempts from CDP requirements the repair or maintenance of structures that does not result in an addition to or enlargement or expansion of the structure being repaired or maintained. Coastal Act §30610(b) generally exempts from CDP requirements improvements to any structure other than a single family residence or public works facility. In each of these exemption cases, §30610 provides that the Commission shall specify by regulation those types of repair and maintenance activities or improvements to structures that involve a risk of adverse environmental effect, which shall require a CDP.

The proposed project does not qualify for the repair and maintenance exemption. The proposed project involves replacement of existing substandard OWTSs for the Beach House and restaurant with new upgraded larger systems to be located in different footprints and configurations than the existing systems. Therefore, the proposed project is not a repair and maintenance project because it does involve an addition to and enlargement/expansion of the existing OWTS for both the Beach House and the restaurant.

In addition, the proposed project does not qualify for the exemption for additions to structures other than SFRs or public works facilities. Section 13253 of the Commission administrative regulations provides, in relevant part, as follows (emphasis added):

> *(a) For purposes of Public Resources Code Section 30610(b) where there is an existing structure, other than a single-family residence or public works facility, the following shall be considered a part of that structure:*
>
> *(1) All fixtures and other structures directly attached to the structure.*
>
> *(2) Landscaping on the lot.*
>
> *(b) Pursuant to Public Resources Code Section 30610(b), the following classes of development require a coastal development permit because they involve a risk of adverse environmental effect, adversely affect public access, or involve a change in use contrary to the policy of Division 20 of the Public Resources Code:*
>
> *(1) Improvement to any structure if the structure or the improvement is located: on a beach; in a wetland, stream, or lake; seaward of the mean high tide line; in an area designated as highly scenic in a certified land use plan; or within 50 feet of the edge of a coastal bluff;*
>
> *(2) Any significant alteration of land forms including removal or placement of vegetation, on a beach or sand dune; in a wetland or stream; within 100 feet of the edge of a coastal bluff, in a highly scenic area, or in an environmentally sensitive habitat area;*
>
> *(3) The expansion or construction of water wells or septic systems;*
>
> …

As (1) portions of the proposed improvements are located within 50 feet of the edge of a coastal bluff, and (2) all of the proposed improvements involve the expansion or construction of septic

systems, the proposed improvements require a CDP under section 13253(b) because they involve a risk of adverse environmental effect.

E. PROTECTION OF WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act addresses the protection of coastal water quality and marine resources in conjunction with development and other land use activities:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with the surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The Little River, which flows into the ocean at Moonstone Beach, is included on the list of impaired waterways under the federal Clean Water Act due to the presence of fecal coliform bacterial contamination at significantly higher concentrations than the acceptable levels under state and federal water quality standards.[4] The Little River also is listed by the State Water Resources Control Board as impaired for recreational use due to pathogens (fecal indicator bacteria).[5] High levels of fecal coliform in general are known to originate from OWTS failures as well as agricultural runoff, pets, and other potential sources known to be present in the Little River watershed. The Little River also provides habitat for at least two species of anadromous salmonids (coho salmon and steelhead trout) that are listed as threatened under the federal Endangered Species Act (coho salmon also is listed as threatened under the California ESA).[6]

Water Quality Improvement Project

The principal purpose of the project is to protect the water quality of the Little River and Pacific Ocean by minimizing the adverse effects of wastewater discharges associated with the existing

[4] Source: Humboldt Baykeeper https://www.humboldtbaykeeper.org/news/press/911-six-local-humboldt-county-waterways-under-attack-over-600-times-healthy-bacteria-level-detected-in-creek.html

[5] See https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/coastal_pathogen/ and https://ofmpub.epa.gov/waters10/attains_waterbody.control?p_list_id=CAR1082001219990617111952&p_state=CA&p_cycle=2016#tmdls

[6] https://www.casalmon.org/salmon-snapshots/habitat/little-river-1

substandard wastewater systems on the property. Both existing systems have a history of failure, according to County DEH, and neither is built to modern standards.

The applicants have provided plans prepared by professional engineers from SHN Consulting Engineers & Geologists for an onsite wastewater treatment system to serve the Beach House and restaurant (described in Finding IV-A above). The estimated capacity of the system, an average daily wastewater flow rate of 1,200 gallons per day, is based in part on (1) the number of weekly events at the Beach House that occur during the peak season (five events/week, 500 gallons/event, 357 gallons/day average), (2) the nightly number of patrons served at the restaurant and bar during the peak season (160 patrons, 5 days/week, 800 gallons/day average), and (3) the number of nightly employees at the restaurant. The applicants have provided evidence from the County DEH that a DEH Environmental Health Specialist has reviewed and preliminarily approved the proposed system as adequate to serve the Beach House and restaurant.

The proposed new OWTS, described in Finding IV-A above, will improve the sewage treatment at the Beach House and restaurant facilities by providing upgraded treatment measures. Waste discharge from both the Beach House and the restaurant will be routed from the proposed new primary tanks to the proposed new recirculation tank and new Orenco AdvanTex pre-treatment unit. The treatment unit utilizes a system of textile filters to remove biochemical oxygen demand (BOD), total suspended solids (TSS), and nitrogen to pre-treat the wastewater effluent before its transmission to the disposal field. Following pre-treatment, the effluent will be pumped to the new pressurized distribution field on the inland side of the upper parking lot for final treatment and disposal. The distribution disposal field is designed and will be engineered to protect groundwater quality by promoting subsoil aeration and maintaining an acceptable separation distance between the pre-treated effluent and the wet season's saturated zone.

As discussed above, the proposed OWTS requires the approval of the County DEH. County DEH staff has indicated to Commission staff that based on its preliminary review, the OWTS, as proposed, will adequately contain, transmit, treat and disperse treated wastewater effluent from the Beach House and restaurant facilities consistent with water quality standards and regulations. To ensure that the project ultimately approved by County DEH substantially conforms with the development approved by the Commission under this CDP, the Commission imposes **Special Condition 1**. This condition requires submittal of the County permit prior to commencement of construction. This will ensure that the project does not proceed until County DEH is satisfied that the OWTS will be repaired and installed consistent with County Environmental Health Code requirements. The condition also requires the applicant to inform the Executive Director of any changes to the project required by the County. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit. This allows the Commission to ensure that the project does not get changed in a manner that would undermine the Commission's consistency finding. Therefore, the Commission finds that the proposed development as conditioned will maintain and help restore the biological productivity and quality of coastal waters by minimizing adverse effects of wastewater discharge consistent with §§ 30230 and 30231 of the Coastal Act.

Timing of Work

As discussed, the Beach House currently has no properly functioning septic system, since the system failed in 2017. The applicant was issued directives by County DEH in 2017[7] to (1) cap the pipe that leads to the disposal line to prevent exit of wastewater from the septic tank, (2) contract with a septic tank pumper/waste hauler to pump the tank as needed when contents reach maximum 90% tank capacity, (3) contract with a qualified consultant to design a replacement OWTS for the site that includes a pretreatment component, and (4) obtain all necessary permits to replace the OWTS for the Beach House and restaurant, which also has a history of failure. The County DEH's initial deadline for the applicant to complete all four of these directives was September 9, 2017. The applicant capped the pipe leading to the disposal line and contracted with a septic tank pumper/waste hauler to pump the tank as needed, but as the applicant had not completed the third and fourth of the above listed directives by that time, that deadline later was extended by County DEH, since it was apparent that steps were being taken towards completing the design and permit directives.

The longer the commercial facilities on the site continue to operate with partially functioning and substandard septic systems, the greater the risk of another failure event occurring that could result in impacts to water quality, marine resources, and surrounding park and recreation areas.[8] On May 3, 2019, during a routine inspection, County DEH documented evidence of recent septage overflow of the Beach House septic tank. The inspection noted that the tank at that time was filled to the top of the risers beyond the 90% tank capacity threshold that had been identified by County DEH as the trigger for pumping of tank contents under the County's directive. County DEH required the tank to be pumped immediately and from that point forward on a weekly basis. County DEH also committed to conducting biweekly inspections of the system to confirm compliance and instructed the applicant to obtain the necessary permits to construct the new replacement OWTS by September 9, 2019.

The applicant anticipates that construction is expected to take no longer than 30 days and anticipates completion of construction by March 31, 2020. As County DEH has provided preliminary approval of the proposed OWTS plans, this timeline for construction appears to be feasible.

Ongoing Maintenance of Water Quality

Regular inspections and maintenance are essential to the ongoing functional operation of any OWTS. The applicant's consulting engineering geologist estimates that the new OWTS:

> "…is expected to function for the remaining economic lifespan of the Moonstone Beach House and Moonstone Grill restaurant, estimated to be on the order of 50 years or more. The longevity of the storage, treatment, pumping, and dispersal system is dependent on regular system maintenance and monitoring to ensure that the system performs as designed for its life."

[7] County DEH Notice of Violation letter dated June 9, 2017.

[8] According to the applicant, the commercial use of the Beach House and restaurant pre-dates CDP requirements, and there are no permits on file with the Commission or Humboldt County for the commercial operation of these facilities. Thus, these facilities are not currently operated subject to CDP requirements.

According to County DEH, the new OWTS will be subject to periodic inspections and maintenance required by the County. Inspections are required by County DEH to be conducted by a qualified professional, typically every three years. Inspections generally include an assessment of the wastewater storage tank contents such as sludge and solids levels, verifying the pumps are in good working order, verifying that the high-water level alarms are functioning, and a visual assessment of the dispersal field to verify it is in proper working order. Inspection results are reviewed by and kept on file with County DEH. Routine maintenance typically includes, at a minimum, pumping and disposal of the septic tanks by a certified waste hauler at regular intervals (typically every 3 to 5 years). In addition, according to the operations and maintenance manual for the AdvanTex treatment system (Exhibit 7), maintenance of the AdvanTex system and its components requires specialized tools, equipment, and spare parts and should be performed at regular intervals by a qualified service provider. The manual recommends scheduled maintenance of the pre-treatment unit that includes, at a minimum, the following: (1) **monthly inspections and maintenance** during the first year of operation to confirm the proper installation and functioning of the system and to help familiarize the operator with the system by (a) confirming appropriate liquid levels in tanks, (b) checking filters and clean as required, and (c) confirming proper operation of meters, pumps, and valves; (2) **quarterly testing** for BOD, TSS, fats, oils, grease, ammonia, nitrate, and pH for the first year, at a minimum, to establish a baseline; (3) **semi-annual (twice yearly) inspections and sampling** to (a) sample influent and effluent quality parameters, (b) inspect and clean as required spray nozzles in the AdvanTex pods, (c) measure inlet or residual pressures to the pods and clean as required, and (d) inspect recirculating valve to confirm that liquid level in the tank is within the normal range; (4) **annual inspections and maintenance** of system components to (a) inspect and clean as required spray nozzles, (b) confirm that valves and liquid levels are within the normal range, (c) measure scum and sludge layers to determine when to pump septage contents from tanks, (d) check voltages and amperages of pumps to ensure proper operation; and (5) **corrective maintenance** as needed to ensure normal operating conditions are promptly and appropriately restored in case of alarm trigger, such as when the liquid in the tank reaches a level that is higher or lower than it should be or when there's a need to replace inoperable floats and pumps.

The applicant proposes that "maintenance of the AdvanTex AX100 treatment system and its system components are to include and be performed as specified in the AdvanTex O & M Manual…" (Exhibit 7). Therefore, to ensure that the necessary regular inspections and maintenance of the OWTS that are essential to the proper operation of the system are completed over the lifespan of the commercial facilities on the site as proposed to minimize any possible adverse effects of wastewater discharge and maintain water quality, the Commission includes **Special Condition 3**. This condition requires the permittee to undertake regular inspections and maintenance of the OWTS, performed by a qualified professional approved by County DEH, consistent with the County DEH requirements and with the recommendations of the commercial treatment manufacturer outlined above, whichever is the most restrictive. The condition further requires that all inspection and maintenance records be maintained by the permittee and made available to the Commission's Executive Director upon request.

Protection of Water Quality During Construction

Finally, although the proposed development is designed to correct existing water quality concerns, construction of the proposed development could have its own water quality impacts if

stormwater runoff is not adequately controlled on the construction site and causes soil erosion. Sediment and other pollutants entrained in runoff from the construction site that reaches the beach and river would contribute to water quality degradation and the degradation of any intervening sensitive habitat. Sediment is considered a pollutant that affects visibility through the water and affects plant productivity, animal behavior (such as foraging) and reproduction, and the ability of animals to obtain adequate oxygen from the water. Sediments may physically alter or reduce the amount of habitat available in a watercourse by replacing the pre-existing habitat structure with a stream-bottom habitat composed of substrate materials unsuitable for the pre-existing aquatic community. In addition, sediment is the medium by which many other pollutants are delivered to aquatic environments, as many pollutants are chemically or physically associated with these sediment particles.

The applicant's plans include certain general, non-specific erosion control measures and other construction Best Management Practices (BMPs) that will be implemented during construction, including (i) installing appropriate sediment control BMPs on the site prior to site disturbance; (ii) maintaining BMPs in place during the course of construction work to ensure that no visible sediment leaves the site; (iii) using tracking control BMPs; (iv) minimizing the disturbance footprint to the extent practical during construction; (v) using appropriate stockpile management BMPs; and (vi) stabilizing disturbed areas as soon as possible following construction. The applicant also has proposed BMPs specific to the horizontal directional drilling work (HDD) that include the use containment, response, and clean-up BMPs at drilling entry and exit points, including (a) straw or hay bales; (b) silt fencing; (c) plastic sheeting; (d) hand tools including shovels, pails, push brooms, and squeegees; (e) pump and hose; and (f) mud storage tanks. According to the applicant's engineering geologist, low-pressure HDD poses no risk of frac-out as may occur with high-pressure HDD operations. Nevertheless, the applicant will implement standard operating procedure clean-up measures such as (1) removing any leaked drilling fluid around drill holes by carefully scraping the ground surface to bare topsoil with shovels, with care taken to minimize the loss of topsoil and sod; (2) disposing of all recovered drilling fluid offsite at an approved disposal facility; (3) collecting in containers recovered materials for temporary storage prior to removal from the site; and (4) removing all BMPs and containment structures from the site following completion of construction.

While these water quality protection measures proposed by the applicant will help reduce water quality impacts in some cases, the proposed measures do not go far enough or are not specific enough to ensure that runoff is controlled and water quality is maintained in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of marine organisms consistent with the mandates of §§ 30231 and 30231. For example, no specific BMPs have been proposed to minimize the potential for the discharge into runoff or coastal waters of pollutants such as chemicals, vehicle fluids, debris, and trash that may be result from construction work. In addition, the project proposes to use manufactured straw wattles as "temporary" erosion and sediment control measures during construction. Plastic netting used in these and similar products (e.g., mulch control netting, erosion control blankets, fiber rolls, and reinforced silt fences) has been found to entangle wildlife and contribute to marine debris/plastic pollution. Although erosion and sediment control products classified as temporary are designed to degrade after a period of time, several temporary erosion and sediment control products with netting – such as mulch control netting, erosion control blankets, and fiber rolls – are commonly

left in place permanently, particularly when used with seeding. The length of time it takes for netting to begin to degrade depends on the netting composition and the environmental conditions but can remain intact many years after installation. When plastic netting does eventually fall apart, plastic fragments may be blown or washed into waterways and the ocean, creating an entanglement and ingestion hazard for marine life, potentially for many years. Due to its durability, buoyancy, and ability to concentrate toxins present in the ocean, plastic can be very harmful to marine life.

To ensure that the project implements the full suite of appropriate BMPs to protect water quality, the Commission attaches **Special Condition 4**. This condition lists construction responsibilities that must be adhered to during construction, including the BMPs proposed by the applicant, summarized above as modified and augmented by various additional requirements needed to maintain the biological productivity and quality of coastal waters consistent with §§ 30230 and 30231 of the Coastal Act. As conditioned, construction responsibilities include, but are not limited to: (a) properly containing trash and removing it from the work site on a regular basis; (b) covering and containing stockpiles; (c) prohibiting the use of temporary rolled erosion and sediment control products with plastic netting to minimize the potential for wildlife entanglement and plastic debris pollution; (d) requiring that any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design to reduce the potential for small animal entrapment and avoid leaving a residue of plastic in the environment upon degradation of the material; and (e) requiring at least 50 feet of separation between equipment fueling sites and coastal waters.

Excavation for septic and pump tank installation and for the disposal field may generate excess earthen material that is unable to be used as backfill. In addition, the project will generate a certain amount of construction debris. No disposal site for such material is available at the site. Disposal of such material within the Moonstone area would result in either direct pollution of coastal waters or allow for indirect pollution by the entrainment of such wastes into runoff flowing to coastal waters. Therefore, the Commission attaches **Special Condition 5**. The special condition requires the applicant to submit to the Executive Director for review and approval (prior to the issuance of the permit) a debris disposal plan demonstrating that all excess excavated material and construction debris from the development will be properly removed from the site and disposed of at an authorized disposal facility capable of receiving such materials.

Conclusion

The proposed project will prevent continued contamination of surface and groundwater at the site that flows to the Little River and ocean from the failing septic systems on the property, thereby preventing further releases of polluted runoff into coastal waters and minimizing adverse effects of wastewater discharges. Special Conditions have been attached to assure that the new OWTS will be properly installed and maintained over its lifespan to prevent sewage discharges as well as to ensure that the construction work itself will not result in other water quality impacts. Therefore, as conditioned, the Commission finds that the biological productivity and quality of coastal waters will be maintained, and the project, as conditioned, is consistent with §§30230 and 30231 of the Coastal Act.

F. PUBLIC ACCESS AND RECREATION

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects, except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or where adequate access exists nearby. Section 30211 of the Coastal Act requires that development not interfere with the public's right of access to the sea where acquired through use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying §§ 30210, 30211, 30212, and 30214, the Commission is also limited by the need to show that any denial of a permit application based on these sections or any decision to impose conditions requiring public access on the granting of a permit is necessary to avoid or offset a project's adverse impact on existing or potential access.

Moonstone Beach is one of the most popular beaches in Humboldt County. As described above, Moonstone Beach consists of an 11-acre beach park managed by the County and a contiguous approximately 2-acre beach area within the boundaries of a public easement on the applicant's property that is held by the Trinidad Coastal Land Trust and cooperatively managed/maintained by the land trust and the applicant. Documentation of the public's use and enjoyment of Moonstone Beach' dates back over 100 years. On any given day of the year, public users of this beach may be found hiking, dog-walking, sunbathing, picnicking, surfing, paddle-boarding, swimming in the ocean and Little River (which flows into the ocean at Moonstone Beach), rock-climbing, beachcombing, fishing, and/or enjoying other recreational activities. In addition, as discussed in Finding IV-H below, Moonstone Beach and the surrounding area is of important cultural and spiritual significance to contemporary Yurok people, including the Yurok Tribe, Trinidad Rancheria, and Tsurai Ancestral Society.

Moonstone Beach is a popular site for weddings and other special events in part because the applicant's Beach House offers a venue available for private rental year-round that can accommodate catered events for large groups of people. The restaurant on the property ("Moonstone Grill" since approximately 2005; previously "Merryman's Restaurant" for approximately 38 years prior to that) currently is open evenings on Wednesdays through Sundays and includes an advertised happy hour bar and views for dining patrons of the ocean, beach, and river from its bluff-top location.

The County maintains a paved parking area to facilitate access to the beach and other access amenities (a portable toilet, waste receptacles, signage, and a tsunami siren) at the foot of (western end of) Moonstone Beach Road. The County's paved parking area includes parking for approximately 10 vehicles, including one ADA-accessible parking space. Parking is prohibited along Moonstone Beach Road, as the road is not wide enough to allow for both two-way vehicular travel and roadside parking. Immediately to the south of and adjacent to the County's paved parking lot is the applicant's property, including the Beach House and an unpaved, graveled parking pad elevated approximately four to six feet above the beach with room for approximately 50-60 vehicles. There are no stripes or marked parking stalls in this unpaved lot,

and the unmanaged parking is at times haphazard and often constrained, particularly on warm weekend days and/or when the Beach House is hosting an event. Because the use of the Beach House as an event venue pre-dates CDP requirements, there are no permits or associated parking plans on file with the Commission or Humboldt County for this use.

The western (seaward) side of the gravel parking area (adjacent to the beach) is within a recorded public access easement area held by the Trinidad Coastal Land Trust. There is room to park approximately 30-35 vehicles in this area. The public easement, recorded in 1978, is "a perpetual and exclusive easement" granted by the Merryman family to the Trinidad Coastal Land Trust (formerly named Humboldt North Coast Land Trust) over a defined approximately 2-acre easement area that includes both beach area and parking area "for the purpose of providing public access to the ocean, strolling, sunbathing, picnicking, fishing, general viewing and other recreational purposes and uses consistent therewith including, but not limited to, parking in connection with the use of the beach…" The easement also provides, in relevant part, for the following:

> *The grantee* [land trust] *shall have the right to do all things reasonably necessary for conservation of the premises including the right to landscape the same, erect signs, build seawalls or other similar facilities, and take any steps reasonably required to protect the public…*
>
> *The grantor* [landowner] *reserves unto himself, his heirs, and assigns the right to use the parking lot as it now exists in conjunction with the grantee, provided, however, that the grantee shall have no duty to maintain the parking lot at any time…*

The eastern (inland) side of the gravel parking area, which includes space for approximately 20-25 vehicles to park, is not within the surveyed boundaries of the recorded public easement described above. However, for many decades the public has often used the entire parking area, including the area outside of the easement, for public access to Moonstone Beach. On crowded days, the public also historically has used the northern portion of the upper parking lot, which usually has additional parking spaces available beyond those that are used by restaurant patrons and employees.

Construction of the new OWTS on the property will require the temporary closure of approximately 15 parking spaces on the inland side of the gravel parking lot adjacent to the beach and approximately 12 parking spaces on the northeastern side of the upper paved parking lot for construction equipment, staging, and OWTS improvement work (Exhibit 4, page 6). The applicant has indicated that the construction duration for the OWTS at the Beach House is expected to be no longer than 14 days. Construction of the OWTS components at the restaurant may take slightly longer, but not more than 30 days. Construction is anticipated to begin shortly after CDP issuance, after the applicant obtains the required permit from County DEH.

To ensure that no additional parking is displaced beyond the minimum needed to construct the OWTS as proposed, the Commission attaches **Special Condition 4-B(iii)**. This condition requires that prior to commencement of construction, the limits of the construction work and

staging areas shall be delineated with temporary fencing or flagging, limiting the potential areas affected by construction to only those areas identified on the proposed construction staging and work area site plan mark-up submitted on September 25, 2019 (Exhibit 4, page 6). All construction work and staging shall be limited to those areas, and no other areas shall be used for construction activities or be subject to parking closure without an amendment to this coastal development permit.

The Beach House will be closed during construction of the OWTS, so the displacement of parking spaces on the inland side of the lower parking lot will not lead to Beach House patrons using the public easement area or County public beach parking spaces for parking. However, the restaurant is anticipated to remain open for most of the construction period. Because of the short duration of construction work (up to 30 days maximum) combined with the fact that the restaurant is open only during evenings/nights (not during daytime hours) and is closed Mondays and Tuesdays, there is little potential that restaurant patrons displaced by construction staging would displace public beach parking.

Undertaking construction during the relative low season for public use of Moonstone Beach (i.e., during the late fall/winter) when the weather and ocean temperatures tend to be cooler and the waves rougher (and therefore not as popular for beach use, swimming, and surfing) will help to minimize adverse impacts on public access use associated with the proposed development. In addition, limiting the construction period for installation of the OWTS for the Beach House to the 14-day period proposed by the applicant will also help minimize adverse impacts on public access. Nevertheless, construction may adversely impact public access use by creating (1) conflicts between construction vehicles and members of the public driving, bicycling, or walking along narrow Moonstone Beach Road and within the lower parking lot to access the beach, and (2) noise, dust, and possibly fumes and odors that could adversely affect the public's enjoyment of the use of the beach. The Commission therefore imposes **Special Condition 2**, which states, in part, that (a) construction work shall be completed no later than March 31, 2020 (i.e., the end of the low/winter season), and (b) construction activities, including the proposed temporary parking closures, shall not exceed 30 days total (parking closure of the lower parking area adjacent to the beach shall not exceed 14 days total).

Therefore, the Commission finds that the proposed project, as conditioned, will have no significant adverse effect on public access consistent with the public access policies of the Coastal Act.

G. ARCHAEOLOGICAL RESOURCES AND TRIBAL CONSULTATION

Section 30244 of the Coastal Act states:

> *Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The project area lies within the traditional territory of at least three tribal groups: the Yurok Tribe, the Trinidad Rancheria, and the Tsurai Ancestral Society. During the review of a previous

CDP application for improvements at the site (CDP Application No. 1-14-0571), which was eventually withdrawn, tribal groups had recommended that an archaeological assessment and survey be performed. In consideration of the archaeological concerns raised by the tribal groups, Commission staff requested that an archaeological assessment and survey be completed for the currently proposed development as an application filing requirement. Commission staff also referred the project to the tribal contacts recommended for consultation by the Native American Heritage Commission (NAHC) and other tribal representatives with known interest in the project area region.[9] Representatives from three tribes (the Wiyot Tribe, the Bear River Band of the Rohnerville Rancheria, and the Blue Lake Rancheria) responded to the Commission's referral stating that they had no comment on the project.

A cultural resources report was completed for the project in October of 2018 (and first submitted to Commission staff on July 30, 2019) by a registered professional archaeologist with William Rich and Associates. The archaeological work involved a review of the confidential survey and resource records on file at the Northwest Information Center (NWIC), a review of archaeological and historical literature pertinent to the project and surrounding area, correspondence and meetings with local tribes, and a field survey. The report states that "Despite a thorough pedestrian survey, no artifacts, features, or other archaeological deposits were identified within the proposed project area. It is possible that buried archaeological deposits are present beneath paved and filled surfaces…"

The report includes a summary of recommendations developed in consultation with tribal representatives from the Yurok Tribe, Trinidad Rancheria, and Tsurai Ancestral Society for the project. Due to known sensitive archaeological resources in the surrounding area, including the historic Yurok village of *Sre'por*, and due to the "immeasurable significance" of Moonstone Beach and the surrounding area to the Yurok people of the three tribal groups, the report recommends that both a tribal monitor and archaeologist be present during project implementation in case archaeological resources or human remains are unearthed during construction. The report recommends that the monitors should have experience monitoring for Yurok tribal cultural resources during excavation projects and should (a) be competent to identify significant resource types, (b) be aware of recommended tribal procedures for responding to the inadvertent discovery of human remains, and (c) have the ability to stop work when needed. The report also recommends that the project be redesigned in part to avoid certain specific areas on the site and to minimize ground disturbance. In response to the report and tribal recommendations, the applicant revised the OWTS siting plan consistent with the tribes' recommendation (revised plans submitted July 30, 2019), as reflected in the currently proposed site plan (Exhibit 4). The applicant also proposed minimizing ground disturbance by using low-pressure directional drilling to install wastewater transmission lines rather than trenching. Finally, the report recommends that the project implement certain measures to minimize ground disturbance, including leaving in place the root balls of trees to be removed if possible, to minimize ground disturbance associated with tree root removal.

[9] Commission staff referred the project (via email) to tribal representatives from the Yurok Tribe, Trinidad Rancheria, Tsurai Ancestral Society, Big Lagoon Rancheria, Wiyot Tribe, Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, and Hoopa Valley Tribe on October 12, 2019.

In response to the recommendations of the tribal representatives and the Cultural Resources Report, and to require implementation of the reasonable mitigation measures summarized above to protect archaeological resources from project construction, the Commission attaches **Special Condition 6**. In addition to the recommended requirements summarized above, the condition also requires that if an area of cultural deposits or human remains is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist, in consultation with the appropriate tribal groups, must analyze the significance of the find. To recommence construction following discovery of cultural deposits or human remains, the permittee is required to submit a supplementary archaeological plan for the review and approval of the Executive Director and obtain a permit amendment for changes the Executive Director determines are not *de minimis* in nature and scope.

Section 30610(b) of the Coastal Act exempts certain improvements to structures other than single-family residences and public works facilities from CDP requirements. Pursuant to this exemption, once a structure has been constructed, certain improvements to the structure that a permittee might propose in the future may normally be exempt from the need for a permit or permit amendment. However, section 30610(b) requires the Commission to specify by regulation those classes of development which involve a risk of adverse environmental effects and require that a permit be obtained for such improvements. Pursuant to §30610(b), the Commission adopted section 13253 of Title 14 of the California Code of Regulations (CCR). Section 13253(b)(6) specifically authorizes the Commission to require a permit for improvements to structures other than single-family residences and public works facilities that could involve a risk of adverse environmental effect by indicating in the development permit issued for the original structure that any future improvements would require a CDP amendment or new CDP. Depending on their nature, extent, and location, additions or improvements associated with the authorized OWTS could result in disturbance to archaeological resources. Therefore, pursuant to 14 CCR §13250(b)(6), the Commission attaches **Special Condition 7**, which requires that all future improvements to the OWTS that might otherwise be exempt from coastal permit requirements pursuant to Coastal Act §30610(b) be required to be authorized by an amendment to this CDP or a new CDP. This condition will ensure that future improvements to the development can be reviewed by the Commission or the local government and reasonable mitigation measures required where such development would adversely impact archaeological resources consistent with the requirements of §30244 of the Coastal Act.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act §30244, as the development includes reasonable mitigation measures.

H. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Section 30240 of the Coastal Act states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which*

> *would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.*

There are no known environmentally sensitive habitat areas (ESHA) within the construction footprint. However, as previously discussed, the subject site is immediately adjacent to Moonstone Beach, a popular County park and recreation area, and portions of the construction site also are adjacent to environmentally sensitive beach and riparian habitat areas. As such, the project must be sited and designed to prevent impacts that would significantly degrade those areas and must be compatible with the continuance of those habitat and recreation areas to be consistent with section 30240(b). Special Conditions 2 through 5, discussed above, will protect the adjacent ESHA and park and recreation areas in several ways. **Special Condition 2** restricts the timing of construction to the non-peak season for Moonstone Beach recreational use and limits the duration of construction activities associated with the installation of the portion of the OWTS that will serve the Beach House to 14 days (during construction of the OWTS components adjacent to the Beach House parking area). **Special Condition 3** requires regular ongoing maintenance and inspections of the new OWTS for the duration of the operation of the commercial facilities on the site. This condition will ensure that the functionality of the system is maintained over time to minimize the potential for discharge of wastewater effluent to adjacent ESHA and park areas, as has occurred in the past. **Special Condition 4** imposes various construction responsibilities that must be adhered to, including BMPs to control erosion and sediment, drilling, stockpile management, and tracking, and other construction activities to maintain the biological productivity and quality of coastal waters. **Special Condition 5** requires the preparation and implementation of a debris disposal plan for the proper disposal of all construction-related waste and debris to avoid the possibility of debris polluting coastal waters, adjacent ESHA, and adjacent park and recreation areas.

The Commission further finds that the ESHA located adjacent to the site could be significantly degraded if non-native, invasive plant species were introduced in erosion-control seeding or in general landscaping that may be installed at the site following construction. Introduced invasive exotic plant species could physically spread into the adjacent ESHA and displace native vegetation, thereby disrupting the values and functions of the adjacent ESHA. The seeds of exotic invasive plants also could be spread to nearby ESHA by wind dispersal or by birds and other wildlife. Although the applicant has not proposed any landscaping as part of the proposed project, seeding disturbed areas following construction is a standard construction practice. Thus, to ensure that no invasive plants are used in reseeding following construction that may significantly degrade adjacent ESHA, the Commission attaches Special Condition 4-B(xi), and 4-B(xii). **Special Condition 4-B(xi)** requires that seed mixes for seeding disturbed areas following construction shall not include any species listed as problematic and/or invasive. **Special Condition 4-B(xii)** requires that only certified weed-free straw mulch be used for erosion, sediment, and runoff control purposes to avoid the inadvertent introduction of nonnative plant species to surrounding environmentally sensitive areas. As discussed in Finding IV-H, above, **Special Condition 7** requires that all future improvements to the OWTS that might otherwise be exempt from coastal permit requirements pursuant to Coastal Act §30610(a) be required to be authorized by an amendment to this CDP or a new CDP. This requirement would apply to any future landscaping to be installed around the OWTS components at the Beach House. Special Condition 7 will ensure that the Commission, or the certified local government,

has the opportunity to review any future landscaping plans under a future CDP application for improvements to the OWTS.

As conditioned in the manner discussed above, the Commission finds that the proposed development is designed to prevent impacts that would significantly degrade adjacent environmentally sensitive habitat areas and park and recreation areas and is compatible with the continuance of those areas, consistent with §30240(b) of the Coastal Act.

I. GEOLOGIC AND FLOOD HAZARDS

Section 30253 of the Coastal Act states, in applicable part:

> *New development shall do all of the following:*
>
> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*
>
> …

The proposed project entails new development in an area subject to high geologic and flood hazards that include the potential for strong ground shaking, liquefaction, bluff erosion, tsunami inundation, and flooding associated with high wave events and storm events (Exhibit 6). The frequency and severity of flood events at the site is expected to worsen with projected sea-level rise rates for the region.

Earthquakes and Seismic Hazards

Northwestern California is one of the most seismically active regions in the continental United States. The Humboldt County region occupies a complex geologic environment characterized by very high rates of active tectonic deformation and seismicity. The subject site is within the direct vicinity of the Mad River-Trinidad Fault Zone, which can produce a magnitude 7.5 earthquake scenario. There are several other geologic sources also capable of producing strong ground shaking and other seismic hazards at the project site, including, but not limited to, the Cascadia Subduction Zone, which can produce a magnitude 9.0 or greater earthquake. Although relatively infrequent, high-intensity ground shaking, liquefaction, and tsunamis are some of the seismic hazards known to occur at the site.

The final plans submitted with the application (Exhibit 4) include certain components to minimize seismic risks. For example, all new OWTS components, except for the pre-treatment unit, will be placed below ground, which provides for a more confined siting than above-ground structures. In addition, flexible (PVC) piping will be used rather than metal piping for wastewater transmission lines and tank connector pipes. PVC piping is preferable because of its flexibility and better tolerance to differential settlement and ground shaking compared to metal piping with welded joints, which break more easily. Moreover, the new tanks will be constructed

either of reinforced concrete or fiberglass, which are manufactured with strict standards for strength and integrity. To ensure that the applicant implements the project as proposed to minimize seismic hazard risks, the Commission attaches **Special Condition 8**, which requires the applicant to construct the project according to the approved final plans.

Tsunami Hazards

The property lies within the County's mapped Tsunami Evacuation Area. Developed by the Redwood Coast Tsunami Working Group organized by Humboldt State University,[10] Tsunami Evacuation Areas are those areas where, in case of a major earthquake, people are instructed to evacuate to higher ground (safe areas) to avoid tsunami-related inundation. Tsunami hazard warning signs are posted throughout the County along public roads and trails to alert the public to the hazardous areas, including signage posted at Moonstone Beach. In addition, the County maintains a tsunami early warning system, including the use of sirens, to minimize risk inside the tsunami vulnerability and evacuation areas. There is a tsunami siren at Moonstone Beach adjacent to the County parking lot.

Most of the components of the proposed new OWTS, including the portion on the upper bluff near the restaurant, will be located at an elevation of at least 45 feet (NAVD88). As such, most of the new OWTS development will be sited above the maximum anticipated tsunami wave runup elevation for the area. A few new components of the OWTS will be sited near the Beach House at an elevation of approximately 19 feet (though buried below ground), potentially within the zone of potential tsunami wave run-up. The proposed OWTS components to be sited within the tsunami hazard area include a new septic tank, pump vault, and wastewater effluent transmission line. However, the proposed siting of the new tanks at least two feet below ground surface and the new transmission line at least 10 feet below ground surface will minimize risks to proposed new development within this area.

Flood Hazards and Sea-Level Rise

All proposed new development, including the new OWTS components to be installed near the Beach House, will be located above the FEMA-mapped 100-year floodplain.[11] However, given the proximity of the site to the beach and ocean, the site is vulnerable both to sea-level rise (SLR) and increased storm intensity associated with projected climate change and, as a result, is likely to experience more frequent and intense flooding episodes and an expansion of the 100-year floodplain over time.

The State of California has undertaken significant research to understand how much SLR to expect over this century and to anticipate the likely impacts of such SLR. In 2017, a working group of the Ocean Protection Council's (OPC) Science Advisory Team released *Rising Seas in California: An Update on Sea-Level Rise Science*. This report synthesized recent evolving research on SLR science, including a discussion of probabilistic SLR projections as well as the potential for rapid ice loss leading to extreme SLR. This science synthesis was integrated into the OPC's *State of California Sea-Level Rise Guidance 2018 Update* (State SLR Guidance). This guidance document provides statewide recommendations for state agencies and other

[10] See http://www2.humboldt.edu/rctwg/

[11] Flood Insurance Rate Map Number 06023C0515G, effective on 6/21/2017

stakeholders to follow when analyzing SLR in association with projects. Notably, the guidance provides a set of regional projections recommended for use when assessing potential SLR vulnerabilities for a project. Taken together, the Rising Seas report and State SLR Guidance account for the current best available science on SLR for the State of California.

The State SLR Guidance provides SLR projections for 12 tide gauges in the state and recommends using the projections for the gauge closest to the project site. In this case, the North Spit tide gauge at Humboldt Bay is the applicable gauge. The amount of SLR projected at the North Spit tide gauge for the year 2070 (i.e., through the projected "remaining lifespan" of the existing Beach House and restaurant, as posited by the applicant's geologist) ranges from 2.4 feet (under the "low-risk aversion" scenario) to 4.0 feet (under the "medium high risk aversion" scenario) to 5.6 feet (under the "extreme risk aversion" scenario).[12]

The current mean monthly maximum water (MMMW) elevation at the North Spit tide gauge is approximately 7.8 feet NAVD88.[13] Future MMMW in the year 2070 under the medium-high risk scenario cited above is projected to be approximately 11.8 feet NAVD88 (i.e., 7.8 ft. + 4.0 ft. of SLR). Consideration of the medium-high risk scenario (+4.0 ft.) is appropriate in this case, because the OWTS as designed has a relatively low capacity to adapt to risks associated with tidal flooding (e.g., erosion hazards), and the consequences the development being subjected to tidal flooding impacts in the future would be significant (e.g., potential adverse effects of wastewater discharge). Consideration of the medium-high risk scenario also is consistent with the State SLR Guidance, which recommends a precautionary approach to SLR adaptation planning. Thus, under this scenario, portions of the property at and below 11.8 feet may be vulnerable to future tidal flooding (year 2070) on a regular basis (multiple times annually) in addition to (potentially) riverine flooding.

The new OWTS components will be sited at elevations ranging from approximately 19 feet to over 45 feet (though the components will be buried at least two feet below the ground surface). Assuming that by the year 2100 sea level will rise within the range of projected rates discussed above, thereby subjecting low-lying areas of the property (e.g., beach areas at elevations +11.8 feet and lower) to regular tidal flooding, the project as proposed is sited and designed to avoid the risk of tidal flooding factoring in projected SLR at even the most extreme scenario (+5.6 ft.) for the presumed remaining 50-year lifespan of the existing Beach House and restaurant, which the new OWTS will serve.

Although based on these elevations and projected SLR rates the proposed development is not expected to experience regular tidal inundation as a result of projected SLR during its anticipated lifespan, the new OWTS components on the lower portion of the property (near the Beach House) could be subject to a combined flood event involving high tide and storm surge. Extreme

[12] The OPC projections are based on different scenarios related to future emissions and concentrations of greenhouse gases, aerosols, and other climate drivers. As recommended by the OPC guidance, for the year 2100, the "low risk aversion" scenario is derived from taking the upper range of the 66% probability range for "RCP-8.5," which is the "Representative Concentration Pathway" that assumes there will be no significant efforts to reduce emissions globally. The "medium-high risk aversion" projection is derived from the upper range of the 0.5% probability range for RCP-8.5. The "extreme risk aversion" projection is based on presumed ice sheet loss in Greenland and the Antarctic.

[13] Northern Hydrology and Engineering 2015

flood events in the past have flooded portions of the lower parking area and base of the Beach House (which is elevated several feet above ground level on a raised foundation). These events have contributed to erosion of the gravel parking area, which, at its lowest point, is at an elevation of approximately 16 feet. The highest portion of the public beach adjacent to the raised gravel parking area is approximately 12 to 14 feet. As the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore, there will be increased flooding, erosion, and storm impacts to coastal areas. Accompanying this rise in sea level will be an increase in wave heights and wave energy.

With expected SLR and related erosion and flooding, the beach area between the subject site and ocean waters is expected to narrow with time. Likewise, flooding from the Little River could approach the subject site more in the future, raising the question of potential impacts to the subject site due to these coastal hazards. This in turn raises the question of a possible request for future shoreline protection at the site to protect the new OWTS. To be consistent with the Chapter 3 policies of the Coastal Act, proposed development must be sited, designed, and conditioned in such a way that considers the impact of the development upon coastal resources over its full economic life, avoiding and mitigating those impacts as appropriate.

Adverse Coastal Impacts Due to Shoreline Protection Devices

The Coastal Act discourages shoreline protection devices because they generally cause significant impacts on coastal resources and can constrain the ability of the shoreline to respond to dynamic coastal processes. This is expected to be exacerbated with future SLR. There are several adverse impacts associated with shoreline protection devices. First, as a sandy beach erodes, the shoreline will generally migrate landward, toward the shoreline protection device, resulting in reduction and/or loss of public beach area and, in some cases, public trust lands, while the landward extent of the beach does not increase. Second, oftentimes the protective structure is placed on public land rather than on the private property it is intended to protect, resulting in physical loss of beach area formerly available to the general public. Third, the shoreline protection device may actually increase the rate of loss of beach due to wave deflection and/or scouring (this is site-specific and varies depending on local factors). Fourth, shoreline protection devices cause visual impacts and can detract from a natural beach experience, adversely impacting public views. Finally, shoreline protection devices can lead to loss of ecosystem services, loss of habitat, and reduction in biodiversity compared to natural beaches.[14] Because shoreline protection devices, such as seawalls, revetments, and groins, can create adverse impacts on coastal processes, §30253 specifically prohibits development that could "…*create* [or] *contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs*."

If it is known that the development requires shoreline protection, it would be unlikely that such development could be found to be consistent with §30253, which, as stated above, requires that new development not *create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area*, given the well-known coastal resource impacts that shoreline protection typically causes.

[14] Summarized from http://www.beachapedia.org/Seawalls

As previously discussed, based on current and projected tidal elevations, the proposed new development at the Beach House is not expected to experience regular tidal inundation as a result of projected SLR during its anticipated lifespan. However, factoring in the effects of 100-year storm events leading to increases in wave heights and wave energy in addition to SLR, the proposed development site could be subject to flood events during its expected 50-year life.

No Shoreline Protection

Given the location of the different elements of the OTWS either along the base of the coastal bluff, within the bluff, or adjacent to the bluff, any shoreline or bluff protective device installed in the future to protect the OTWS elements would be placed somewhere along the bluff and could alter the natural landform of either the bluff itself or the beach and the flat upland area extending from the beach to the bluff. To comply with the prohibition under §30253 on new development in any way requiring the "construction of protective devices that would substantially alter natural landforms along bluffs and cliffs," it must be clear that as new development, the development approved by this permit is not entitled to a shoreline protection device now or in the future. The applicant has not proposed to construct a shoreline protection device and no shoreline protection would be authorized by this permit; however, the applicant or a successor-in-interest could request a shoreline protection device at some point in the future. Therefore, because of the numerous adverse impacts to coastal resources caused by shoreline protective devices, to comply with the §30253 prohibition on new development in any way requiring the "construction of protective devices that would substantially alter natural landforms along bluffs and cliffs," it must be clear that, as new development, the entire development recognized and approved by this permit is not allowed a shoreline protection device now or in the future. Therefore, **Special Condition 9** is imposed to require the applicant to acknowledge that, as new development, the applicant has no right to a shoreline protective device for the project, and no future shoreline protective device will be constructed on site to protect the development authorized under this CDP.

Removal if Development is Threatened

Given that coastal hazards may impact the proposed development to some extent towards the end of its economic life as a result of sea level rise, the Commission must also find that the project assures stability and structural integrity and minimizes "risks to life and property" in an area of high geologic and flood hazard without a shoreline protective device. Section 30253 does not prohibit development in a potentially hazardous area; rather, an applicant must demonstrate that risks to life and property are minimized. Here, it is important to note that the site is not currently threatened by flood hazards, and the project has been designed to be stable and structurally sound under current conditions.

However, as discussed, the best available science indicates that sea level rise is occurring and coastal hazards may threaten the project site to some extent before the end of its economic life, although there are uncertainties inherent in predicting exactly how and when the impacts discussed above will occur. Due to increasing coastal hazards in this area, the new OWTS may become unstable at some point, posing risks to property, and a shoreline protective device would not be an option for protecting the structure from coastal hazards (due to the imposition of Special Condition 9, discussed above, which is also justified to comply with the directive of

Section 30253(a) that new development minimize "risks to life and property" in areas of high flood hazard). If, however, the proposed development (i.e., the new OWTS) were to be removed if threatened, rather than protected by a shoreline protection device, the proposed development may be found to be consistent with the Coastal Act hazards policies, because the structurally unsound or unsafe development would be removed, minimizing risks to property and life.

Therefore, the Commission imposes **Special Condition 9-B**, which requires the landowner to remove the development (consisting of the new OWTS components) if the County or any other government agency with legal jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the OWTS structures or the Beach House or restaurant are currently and permanently unsafe for occupancy or use due to coastal hazards, and that there are no measures that could make the Beach House and restaurant structures suitable for occupancy or use without the use of bluff or shoreline protective devices. This condition requires that if any part of the proposed development becomes threatened by coastal hazards in the future, then the threatened development must be removed rather than protected in place. Furthermore, **Special Condition 9-C** requires preparation of a geotechnical investigation in the event that the edge of the bluff-top recedes to within a point where any portion of the subsurface OWTS improvements becomes exposed. The geotechnical investigation shall identify all those immediate or potential future measures that could stabilize the OWTS improvements without bluff or shoreline protective device(s), including but not limited to, removal or relocation of portions of the OWTS improvements. The report shall be submitted to the Executive Director and the appropriate local government officials. If the geotechnical investigation concludes that any portion of the OWTS improvements is unsafe for occupancy or use, the permittee shall, within 90 days of submitting the investigation, apply for a coastal development permit amendment to remedy the hazard.

Bluff Erosion Hazards

The proposed new OWTS development on the upper bluff near the restaurant will be set back 30 feet or more from the bluff edge (Exhibit 5). The landform upon which the upper bluff portion of the property, including the restaurant, is located is at an elevation of between 45 feet and over 100 feet. The landform was significantly altered through cutting and grading (i.e., making a level site for property access and restaurant construction) between approximately 1952 and 1966.[15] The applicant's certified engineering geologist addressed the stability of the bluff through a qualitative slope stability assessment and review of historic aerial imagery. The resulting information (Exhibit 8, page 5) states that bluff conditions have remained essentially unchanged since at least 1920, and that:

> "…the land surface within the foreshore area has prograded seaward and southward with beach deposits effectively creating Moonstone Beach as we know it today. The active channel of the Little River has also migrated south since that time. The right (northern) bank of the Little River directly downslope of the restaurant location and for some distance upstream has aggraded with sediment

[15] Rich, W. and M. Salisbury. October 2018. A Cultural Resources Report for the Moonstone Grill Onsite Wastewater Disposal System Replacement Project Trinidad, Humboldt County, California. William Rich and Associates, Bayside, CA.

> and since become stabilized with the establishment of a dense riparian canopy. Historic bluff retreat rates appear to be less than a few, if any, feet per century."

The geologic information concludes that the proposed new OWTS components to be sited on the bluff will be set back a sufficient distance from the bluff edge so as to be assuredly stable, and "its proposed placement at a minimum distance of 30 feet from the bluff edge will neither create nor contribute to erosion or geologic instability of the bluff or surrounding area nor will require future armoring" (Exhibit 8, page 5).

Therefore, the Commission attaches **Special Condition 8**, which requires that the authorized development be located no closer to the bluff edge than 30 feet as proposed, consistent with the measurements in the SHN plans.

Notwithstanding the relative degree of insulation of the proposed project improvements in their proposed locations from geologic hazards, the applicant is proposing to construct development that would be located on a bluff top that is subject to erosion risks. Consequently, the development will be located in an area of high geologic hazard. However, as previously discussed, new development can only be found consistent with §30253 of the Coastal Act if the risks to life and property from the geologic hazards are minimized and if a protective device, such as a cliff retaining wall or seawall, will not be needed in the future to protect the development from erosion hazards. Although a geotechnical evaluation is a necessary and useful tool that the Commission relies on to determine if proposed development is permissible at all on any given bluff top site, the Commission finds that a geotechnical evaluation alone is not a guarantee that a development will be safe from bluff retreat. It has been the experience of the Commission that in some instances, even when a thorough professional geotechnical analysis of a site has concluded that a proposed development will be safe from bluff retreat hazards, unexpected bluff retreat episodes that threaten development during the life of the structure sometimes still do occur. Site-specific geotechnical evaluations cannot always accurately account for the spatial and temporal variability associated with coastal processes and therefore cannot always absolutely predict bluff erosion rates. Geologic hazards are episodic, and bluffs that may seem stable now may not be so in the future.

The Commission finds that the subject lot is an inherently hazardous piece of property, that the bluff seaward of the subject site is actively eroding in some areas, and that the proposed new development will be subject to geologic hazards at some point in the future that potentially could engender the need for a bluff protective device, inconsistent with §30253. The proposed development could not be approved as being consistent with §30253 if projected bluff retreat would affect the proposed development and necessitate construction of a cliff retaining wall to protect it. Based upon the geologic information prepared for the site, the risks of geologic hazard are minimized if development is sited and designed according to the setback and construction recommendations and conditions of this permit. However, given that all hazard risks cannot be eliminated, and the geologic assessment cannot guarantee that shoreline protection will never be needed to protect the proposed development, the Commission finds that the proposed development

is consistent with the Coastal Act only if it is conditioned to provide that shoreline protection will not be constructed in the future to protect the new OWTS.

The Commission thus finds that due to the inherently hazardous nature of this lot, the fact that no geology report can conclude with absolute certainty that a geologic hazard does not exist, the fact that the approved development and its maintenance may cause future unforeseen problems, and because §30253 prohibits new development from engendering the need for bluff or shoreline protection that would substantially alter natural landforms along bluffs, it is necessary to attach Special Condition 9. As discussed above, **Special Condition 9** prohibits the construction of bluff or shoreline protective devices on the parcel to protect the approved development and requires that the landowners accept sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion of the site. Special Condition 9-C further requires that in the event that the edge of the bluff-top recedes to a point where any portion of the subsurface OWTS becomes exposed, but no government agency has ordered that the Beach House and/or restaurant and/or OWTS structures not be occupied or operated, a geotechnical investigation shall be prepared by a licensed coastal engineer and geologist, retained by the permittee, that addresses whether any portions of the OWTS improvements are threatened by coastal hazards. The report shall identify all those immediate or potential future measures that could stabilize the OWTS improvements without bluff or shoreline protective device(s), including but not limited to, removal or relocation of portions of the OWTS improvements. If the geotechnical investigation concludes that any portion of the OWTS improvements is unsafe for operation or use, the permittee shall, within 90 days of submitting the investigation, apply for a permit amendment to remedy the hazard. These requirements are necessary for compliance with Coastal Act §30253.

Assumption of Risk and Recordation of Permit Conditions

In addition, as previously discussed, **Special Condition 10** requires the landowner to assume the risks of extraordinary erosion, flooding, and geologic hazards of the property and waive any claim of liability on the part of the Commission. Given that the applicant has chosen to implement the project despite the risks identified in the geologic report, the applicant must assume the risks. In this way, the applicant is notified and has acknowledged that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards. Furthermore, the Commission imposes **Special Condition 11** to require the applicant to record a deed restriction to impose the special conditions of this CDP as covenants, conditions, and restrictions on the use and enjoyment of the property. This special condition is required, in part, to effectively put future property owners on notice regarding the risks of development on the property, the prohibition against construction of bluff or shoreline protective devices to protect the approved development, the Commission's immunity from liability, and the indemnity afforded the Commission.

Conclusion

The Commission finds that the proposed development, as conditioned, can be found to be consistent with §30253 of the Coastal Act, which requires that risks to life and property be

minimized, that stability and structural integrity are assured, and that proposed development neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area.

J. VISUAL RESOURCES

Section 30251 of the Coastal Act states (emphasis added):

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

The property is not within a designated Highly Scenic Area. Nearly all the proposed new development will be buried underground, which will protect views available from the property to and along the ocean and Little River estuary. One component of the new OWTS – the proposed AdvanTex pre-treatment unit – will be sited above ground on the bluff adjacent to the restaurant in an area with views to the beach, ocean, and river available to restaurant patrons approaching the restaurant entrance. However, due to the small size and height of the structure (approx. 16 ft. long by 8 ft. wide by 4 ft. high) and its proposed clustering immediately adjacent to the restaurant building, the pre-treatment unit likely will not be visible from Moonstone Beach and will have no significant effect on public views.

The development sites for the new OWTS components (adjacent to the Beach House, adjacent to the restaurant, and inland of the upper parking lot where the disposal field will be located) each are located on level ground, and no significant grading is proposed that would result in major landform alteration.

Regarding the compatibility of the proposed AdvanTex pre-treatment unit with the character of the surrounding area, the structure, as mentioned, is relatively small in size and appears similar to other types of accessory structures commonly associated with buildings, such as a propane tank or small shed. As the accessory structure will be clustered immediately adjacent to the significantly larger restaurant building, the proposed development will be subordinate to and visually compatible with the surrounding area.

Therefore, the Commission finds that the proposed project as designed is consistent with §30251, as the development will not adversely affect views to or along the coast, result in major landform alteration, or be visually incompatible with the character of the surrounding area.

K. VIOLATION

Violation(s) of the Coastal Act exist on the subject property over time, including, but not necessarily limited to: the installation of an unpermitted rock revetment seaward of the lower parking lot within the area covered by the recorded public access easement; the periodic placement of traffic cones and plastic barriers in portions of the parking lot to reserve or assign parking for the Beach House and associated events; the placement of signage; and the installation of unshielded lighting on the Beach House that shines out over the estuary and beach. The applicant is not seeking authorization for any of the development described above as part of this application, and approval of this application will not authorize the above-described unpermitted development. Commission enforcement staff has open violation files for these alleged violations and will continue to work with the property owner/applicant to redress these open violations on the subject property.

Although development has taken place on the site prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on this permit does not constitute a waiver of any legal action with regard to the alleged violations (or any other violations), nor does it constitute an implied statement of the Commission's position regarding the legality of development undertaken on the subject site without a permit, or of any other development other than the development approved herein. In fact, approval of this permit is possible only because of the conditions included herein and the applicant's presumed subsequent compliance with said conditions, and failure to comply with these conditions in conjunction with the exercise of this permit would also constitute a violation of this permit and of the Coastal Act. Accordingly, the applicant remains subject to enforcement action, just as it was prior to this permit approval, for engaging in unpermitted development.

L. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13906 of the Commission's administrative regulations requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. No public comments regarding potential significant adverse environmental effects of the project were received by the Commission prior to preparation of the staff report. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A
SUBSTANTIVE FILE DOCUMENTS

Application file for CDP Application No. 1-18-0035

County of Humboldt certified Local Coastal Program