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STAFF REPORT: REGULAR CALENDAR

Application No.:	**1-20-0360**
Applicant:	**Karvier Yates**
Agent:	Charlie Hatfield
Location:	2989 North Street, Myrtletown area near Eureka, Humboldt County (APN 014-203-06)
Project Description:	Remodel and expand an existing 1,557-square-foot single-family residence and attached 235-square-foot garage, resulting in a 2,718-square-foot single-family residence with a 420-square-foot attached two-car garage.
Staff Recommendation:	Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

The applicant proposes to remodel and expand an existing single-story, three-bedroom single-family residence with an attached one-car garage, constructed in 1956. The proposed expansion would result in a 2,718- square-foot, two-story (max. 26-foot-tall), three-bedroom single-family residence with an attached 420-square-foot, two-car garage. The proposed new second story also would include a 270-square-foot deck and a 315-square-foot roof garden. The extent of the proposed expansion and remodeling of the house will result in a structure that is considered a new or replacement structure under the Commission's regulations.

The 0.16-acre lot is located in a dense urban area on the immediate outskirts of Eureka with municipal services provided by the Humboldt Community Services District. The existing residence is located approximately 116 feet from Eureka Slough, and the

proposed improvements would maintain a minimum setback of 96 feet from the slough bank.

The project raises hazards concerns under Section 30253 of the Coastal Act because it involves development located in a low-lying area that is vulnerable to flooding and geologic hazards. Flooding is expected to be exacerbated by sea level rise given the site's oceanfront location; however, the residence is sited at an elevation that is expected to be above flood levels over the anticipated life of the proposed structure. As the project is considered new development for which there is no right to construct shoreline protection devices and as construction of a shoreline protective device likely could not be found consistent with the Coastal Act, **Special Condition 7** requires the applicant to acknowledge that no shoreline protective device can be constructed in the future.

The property is also in an area at risk of potential liquefaction. To address this potential hazard, the applicant's engineer completed a soil study with recommendations for site development to minimize risks. Commission staff recommends **Special Condition 1** requiring that all final design and construction plans, including site preparation, foundation design, and drainage plans, be consistent with the engineering recommendations. Finally, **Special Condition 2** requires the landowner to assume the risks of extraordinary erosion and geologic hazards of the property and waive any claim of liability on the part of Commission.

The Motion to adopt the staff recommendation of approval with conditions is found on page 4.

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I. Motion and Resolution

A. Motion

I move that the Commission **approve** Coastal Development Permit Application No. 1-20-0360 pursuant to the staff recommendation.

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

B. Resolution

The Commission hereby **approves** Coastal Development Permit Application No. 1-20-0360 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 period 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. **Conformance of Final Design and Construction Plans to the Geologic Reports**

   A. All final design and construction plans, including site preparation, foundation design, and drainage plans, shall be consistent with the recommendations contained in the geologic report of the site prepared by S.E.E Engineering on August 6, 2020.

   B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

2. **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 from earth movement, liquefaction, erosion, waves, storm surge, tidal inundation, and other geologic and flood hazards, many of which will worsen with future sea level rise; (b) to assume the risks to the applicants 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.

3. **Lighting Limitations**. All exterior lighting, including any lights installed as part of the development approved under CDP 1-20-0360, or in the future, shall be low-wattage, shielded, and downcast such that no light will shine beyond the bounds of the property or into Eureka Slough.

4. **Protection of Archaeological Resources.** If an area of cultural deposits or human remains is discovered during the course of the project, all construction shall cease and shall not recommence until a qualified cultural resource

specialist, in consultation with the Tribal Historic Preservation Officers of the Wiyot Tribe, the Bear River Band of Rohnerville Rancheria, and the Blue Lake Rancheria, analyzes the significance of the find and prepares a supplementary archaeological plan for the review and approval of the Executive Director, and either: (A) 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, or (B) the Executive Director reviews the Supplementary Archaeological Plan, determines that the changes proposed therein are not de minimis, and the permittee has thereafter obtained an amendment to CDP 1-20-0360.

5. **Construction Responsibilities.** The permittee shall adhere to appropriate construction-related best management practices (BMPs) to protect water quality, including, but not limited to, the following:

    A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters;
    B. Any and all debris resulting from construction activities shall be removed from the project site and disposed of properly;
    C. During the course of the project work, 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;
    D. All on-site stockpiles of construction debris and soil or other earthen materials shall be covered and contained whenever there is a potential for rain, to prevent polluted water runoff from the site; and
    E. BMPs shall be used to prevent the entry of polluted stormwater runoff into coastal waters during construction and post-construction, including the use of appropriate BMPs for erosion and runoff control and post-construction BMPs for roof runoff controls, vegetated buffer strips, and bioretention as detailed in the current California Storm Water Quality Best Management Handbooks (http://www.cabmphandbooks.com).

6. **Future Development Restriction.** This permit is only for the development described in coastal development permit (CDP) 1-20-0360. Pursuant to Title 14 California Code of Regulations (CCR) section 13250(b)(6), the exemptions otherwise provided in Public Resources Code (PRC) section 30610(a) shall not apply to the development governed by the CDP 1-20-0630. Accordingly, any future improvements to the development authorized by this permit shall require an amendment to CDP 1-20-0630 from the Commission or shall require an additional CDP from the Commission. In addition thereto, an amendment to CDP 1-20-0630 from the Commission or an additional CDP from the Commission shall be required for any repair or maintenance identified as requiring a permit in PRC section 30610(d) and 14 CCR section 13252(a)-(b).

7. **No Future Bluff or Shoreline Protective Device**

A. By acceptance of Coastal Development Permit (CDP) No. 1-20-0360, the applicant acknowledges and agrees, on behalf of himself 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 1-20-0360, including, but not limited to, the new residence and attached garage, porch, deck, and roof garden, including in the event that the development is threatened with damage or destruction from waves, erosion, storm surge, tidal inundation, liquefaction, 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 himself 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 (a) 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 residence is currently and permanently unsafe for occupancy or use due to coastal hazards, (b) essential services to the site can no longer be feasibly maintained (e.g. utilities, roads); (c) migration of the public trust boundary has caused the development to become subject to the public trust, (d) removal is require pursuant to LCP policies for sea level rise adaptation planning; or (e) the development would require a shoreline protective device to prevent (a) through (d) above. If removal is required, 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. 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 Eureka Slough. In the event that portions of the development erode before they are removed/relocated, the landowner shall remove all recoverable debris associated with the development from the bluffs and slough and lawfully dispose of the material in an approved disposal site. Such removal shall require a CDP.

8. **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.

9. **Public Rights**. The approval of this permit shall not constitute a waiver of any public rights that exist or may exist on the property now or in the future. The permittee shall not use this permit as evidence of a waiver of any public rights that may exist on the property now or in the future.

IV. Findings and Declarations

A. Project Description and Environmental Setting

The 0.16-acre subject lot is located at 2989 North Street, within the Myrtletown area approximately a half-mile east of the City of Eureka in Humboldt County (APN 014-203-06) (Exhibit 1). Eureka Slough, a tidally influenced tributary to Humboldt Bay, is located approximately 116 feet from the existing residence on the property at its closest point.

The project site is on the edge of a developed urban area with municipal services provided by the Humboldt Community Services District. The lot is developed with an existing (circa 1956) 1,557 square-foot, single-story (max. 20-foot-tall), two-bedroom, two-bathroom residence with an attached 235-square-foot garage and a shed[1]. The proposed improvements include a 1,161-square-foot residential addition resulting in a 2,718-square-foot, two-story (max. 26-foot-tall), three-bedroom, three-bathroom, single-family residence with an attached 420-square-foot, two-car garage. The proposed new second-story improvements also include a 270-square-foot deck and a 315-square-foot roof garden atop a first-floor porch deck below. See Exhibit 5.

As mentioned above, the subject lot borders Eureka Slough to the north, a public road (North Street) to the south, and residential lots to the east and west. The lot to the west is developed with a single-family residence, but the lot to the east is undeveloped and vegetated with a mix of native and nonnative upland trees and shrubs. Except for Eureka Slough, which provides habitat for a wide array of sensitive fish species and other aquatic resources, there are no mapped wetlands, sensitive vegetation communities, or other known environmentally sensitive habitat areas on either the subject property or on the adjacent lands.

[1] The existing storage shed is located on the northern edge of the property and within 5 feet of Eureka Slough. This shed was built prior to the passage of the Coastal Act, and no changes are proposed to the shed under this application.

B. Minor Remodel vs. Replacement Structure

Assessing the extent of a remodel is important because, at a certain point, alterations to a structure can be so substantial that they can no longer be considered minor improvements and instead must be considered major remodeling resulting in a new or replacement structure. As a new or replacement structure, rather than just an altered version of the original structure, the entire development must be found to be consistent with the Chapter 3 policies of the Coastal Act.

Section 13252(b) of the Commission's regulations states, in relevant part (emphasis added)

> (b) Unless destroyed by a natural disaster, the replacement of 50 percent or more of a single family residence, seawall, revetment, bluff retaining wall, breakwater, groin or any other structure is not repair and maintenance under Section 30610(d) but instead constitutes a replacement structure requiring a coastal development permit.

Based on section 13252(b), the Commission has found (see A-5-VEN-17-0009 (Thomas), A-5-LGB-18-0012 (Bracamonte); 6-18-0182 (Harris); 5-18-0223 (Walsh), among others) that alterations to a structure must be treated as creating a new structure whenever one of the following takes place: 1) 50% or more of the major structural components are replaced; 2) there is a 50% increase in gross floor area; 3) replacement of less that 50% of a major structural component, when considered in conjunction with prior remodeling work, results in cumulative alterations exceeding 50% or more of that major structural component; and/or 4) less than a 50% increase in floor area where the alteration would result in a cumulative addition of 50% or more of the floor area, taking into account previous additions to the structure. These decisions do not necessarily mean than any less extensive remodeling would not also result in a new structure, but only that remodeling that does reach these levels must be considered to have that effect.

In past actions the Commission has looked at the extent of proposed alteration to an existing residence to determine whether it alters the existing residence to such a significant degree that the entire structure constitutes a "new development" (or a "replacement structure") that must, as a whole, comply with Coastal Act policies. These thresholds have been applied by the Commission to determine when, in practical effect, a project that alters an existing structure makes it effectively a new structure, rather than an improvement to an existing structure.

The proposed development will expand the ground floor of the structure and add a partial second story, altering the existing main residence footprint, foundation, structural roof elements, and exterior walls. The proposed remodeling project surpasses at least two of the four thresholds established by past Commission actions for determining when the alterations are so substantial that the alterations constitute a replacement structure or new development. First, 50% of more of the major structural components will be replaced. A total of 89.41 linear feet of the existing structural walls will be removed and replaced, resulting in modifications to 51% of exterior walls. In addition, the slab

foundation of the existing garage will be demolished and replaced with a new slab foundation that is double the size of the existing to accommodate the larger replacement garage. The proposed project also includes replacement of more than 50% of the roof and exterior walls, both considered major structural components. Second, the remodeling project will result in a greater than 50% increase in gross floor area. The proposed project would add 1,347.6 square feet to the existing 1,791.7-square-foot residence, resulting in a 75% increase in gross floor area. Therefore, the proposed project rises to the level of a major remodel as that term has been applied by the Coastal Commission and constitutes a replacement structure or new development.

C. Standard of Review

The project site is located entirely in the Commission's retained permit jurisdiction. The County of Humboldt has a certified Local Coastal Program (LCP), but the site is within the Commission's retained jurisdiction. Therefore, as required by Public Resources Code section 30519(b) and 14 CCR section 13166(c), the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

D. Other Agency Approvals

The proposed project requires no discretionary approvals from other agencies.

E. Coastal Hazards

Section 30253 of the Coastal Act states, in applicable part, as follows (emphasis added):

> New development shall do all of the following:
>
> a. Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> b. 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 is located in an area subject to high geologic and flood hazards that include the potential for strong ground shaking, liquefaction, and flooding associated with high wave events and storm events. The frequency and severity of flood events at the site is expected to worsen with projected sea-level rise rates for the region.

Flood Hazards and Sea-Level Rise

All proposed new development will be located above the FEMA-mapped 100-year floodplain.[2] However, given the proximity of the site to the tidally influenced Eureka

[2] Flood Insurance Rate Map Number 06023C0845G, effective on 6/21/2017

Slough, the site is vulnerable both to sea-level rise (SLR) and increased storm intensity associated with 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.

Sea level has been rising for many years. Several different approaches have been used to analyze the global tide gauge records in order to assess the spatial and temporal variations, and these efforts have yielded sea level rise rates ranging from about 1.2 mm/year to 1.7 mm/year (about 0.5 to 0.7 inches/decade) for the 20th century, but since 1990 the rate has more than doubled, and the rate of sea level rise continues to accelerate. Since the advent of satellite altimetry in 1993, measurements of absolute sea level from space indicate an average global rate of sea level rise of 3.4 mm/year or 1.3 inches/decade – more than twice the average rate over the 20th century and greater than any time over the past one thousand years[3]. Recent observations of sea level along parts of the California coast have shown some anomalous trends; however, there is unequivocal evidence that the climate is warming, and such warming is expected to cause sea levels to rise at an accelerating rate throughout this century.

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 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.

As our understanding of sea level rise continues to evolve, it is possible that sea level rise projections will continue to change as well (as evidenced by the recent updates to best available science). While uncertainty will remain with regard to exactly how much sea levels will rise and when, the direction of sea level change is clear, and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high or even extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal 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,

[3] http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf

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 2100 (i.e., through the projected "remaining lifespan" of the existing residence) ranges from 4.1 feet (under the "low-risk aversion" scenario) to 7.6 feet (under the "medium high risk aversion" scenario) to 10.9 feet (under the "extreme risk aversion" scenario).[4]

The current mean monthly maximum water (MMMW) elevation at the North Spit tide gauge is approximately 7.8 feet NAVD88.[5] Future MMMW in the year 2100 under the medium-high risk scenario cited above is projected to be approximately 15.4 feet NAVD88 (i.e., 7.8 ft. + 7.6 ft. of SLR). Consideration of the medium-high risk scenario (+7.6 ft.) is appropriate in this case, because the residential improvements as designed have a relatively low capacity to adapt to risks associated with tidal flooding (e.g., erosion and flood hazards), and the consequences of the development being subjected to tidal flooding impacts in the future would be significant (e.g., structural damage to residence). 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 15.4 feet may be vulnerable to future tidal flooding (year 2100) on a regular basis (multiple times annually).

The expanded residence will be sited at elevations ranging from 21 feet to 23 feet. The elevation of the subject property ranges from 9 ft directly adjacent to the slough to 23 feet where it meets North Street. Assuming that by the year 2100 sea levels will rise within the range of projected rates discussed above, thereby subjecting low lying areas of the property to regular tidal flooding, the residential improvements as proposed are sited and designed to avoid the risk of tidal flooding factoring in projected SLR at even the most extreme scenario (+10.9 ft.) for the presumed remaining 75-year lifespan of the existing residential improvements.

No Future Shoreline Protection

The Coastal Act discourages shoreline protection devices, also referred to as shoreline armoring, to protect development along the shore because such structures 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 sea level rise. As a shoreline erodes, the shoreline will generally migrate landward, toward the structure, resulting in reduction and/or loss of natural habitat and in some cases, public trust lands, while the landward extent of the trust lands does not increase. Shoreline armoring may actually increase the rate of erosion due to wave deflection and/or scouring (this is site-specific and varies depending on local factors).

[4] 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.

[5] Northern Hydrology and Engineering 2015

Shoreline armoring causes visual impacts, and shoreline armoring can lead to loss of ecosystem services, loss of habitat, and reduction in biodiversity compared to natural shorelines. The subject property is located on a channel of the Eureka Slough, which is part of a diverse and resource rich mosaic of habitats and supports a multitude of plant and wildlife species, some of which are endangered and rely on the remaining areas of slough habitat for their continued survival.

Coastal hazards and shoreline protective devices also raise public trust concerns. The common law public trust doctrine protects the public's right to access tidelands, submerged lands, and navigable waters, which the State holds in trust for the public's use and enjoyment. This doctrine is enshrined in California's Constitution, which provides in Article X, section 4, that no individual may "exclude the right of way" to any "frontage or tidal lands of a harbor, bay, inlet, estuary, or other navigable water in this State." Cal. Const. Art. X, Sec. 4. The Constitution further directs the Legislature to enact laws that give the most "liberal construction" to Article X, section 4, so that access to navigable waters of the State "shall be always attainable for the people."
As discussed above, future sea level rise will cause the landward migration of the intersection of tidal areas with the shore and, thus, the tidelands and submerged lands that are public trust resources. To the extent that shoreline armoring contributes to erosion and blockage of the natural inland migration of the tidelands and shoreline, and thus results in the loss of public access to tidelands and submerged lands, their construction is also inconsistent with the State's obligation to protect the public's right to access these areas. Knowing, as we do, that our understanding of how fast and how severe sea level rise will occur and the precise impacts on particular coastal areas, is an evolving area of scientific inquiry, the Coastal Commission must act conservatively to manage public trust resources in a way that will protect them for future generations.

Moreover, private residential uses are not public trust uses. Even when shoreline armoring is not present, the placement of structures along an eroding shoreline can impact public trust lands. As the shoreline migrates inland, structures may become located on public trust lands, occupying land that would otherwise be available for public access, ecosystem services and other coastal resource benefits.

Private development on public trust lands creates conflicts with the public access and recreation policies of the Coastal Act. Thus, the Commission's action on this project must consider the effects on public access and recreation both under current conditions and under future conditions, when it is likely that the shoreline in front of the subject site will erode and move inland, up to or past the subject site.

The placement of shoreline armoring at the subject property would likely conflict with the protection of public trust resources and with Chapter 3 policies related to the protection of marine resources (section 30230). New shoreline armoring would also likely conflict with section 30251 of the Coastal Act, which protects the scenic and visual qualities of coastal areas.

Because shoreline protection devices, such as seawalls, revetments, and groins, can create adverse impacts on coastal processes and resources, Coastal Act section 30253 specifically prohibits development that could "create [or] contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area." However,

section 30235 of the Coastal Act recognizes that “existing” development may be protected by shoreline protective devices subject to certain conditions.

Notwithstanding section 30235’s limited allowance for protection of pre-Coastal Act or coastal-dependent use development, in order to avoid the adverse impacts of shoreline protection devices (described above), it is important to assure that new development (such as a major remodel of an existing structure constituting new development, as is being proposed here) not be permitted shoreline armoring to the extent such shoreline armoring would be inconsistent with Chapter 3 coastal resource protection policies. If it is known that the development may need shoreline armoring in the future, it would be unlikely that such development could be found to be consistent with section 30253 of the Coastal Act, 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 armoring typically causes.

No shoreline armoring is currently proposed, and it is not expected that the new development would require a shoreline armoring during its expected project lifetime. However, as discussed above, our understanding of sea level rise continues to evolve, and it is possible that sea level rise projections will continue to change as well.

The proposed new development may be threatened by sea level rise at some point in the future if the rate of erosion and flooding accelerates faster than projected. As discussed previously, the project, which involves major remodeling and expansion of an existing residence, constitutes new development. As such, the development is not entitled to shoreline protection under the Coastal Act, and the Commission imposes **Special Condition 7** to confirm that the applicant is not entitled to shoreline protection for the development approved by this permit, and, in fact, no future shoreline protective device will be constructed on site to protect the proposed development. Instead, the landowner must remove the development if (a) any government agency has ordered that the structures are not to be occupied due to coastal hazards, or if any public agency requires the structures to be removed; (b) essential services to the site can no longer feasibly be maintained (e.g., utilities, roads); (c) the development is no longer located on private property due to the migration of the public trust boundary; (d) removal is required pursuant to LCP policies for sea level rise adaptation planning; or (e) the development would require a shoreline protective device to prevent a-d above. **Special Condition 7** requires that if any of the proposed development becomes threatened by coastal hazards in the future, even though information available today suggests that this is not expected, then the threatened development must be removed rather than protected in place. This condition recognizes that predictions of the future cannot be made with certainty, thereby ensuring that the risks of property damage or loss arising from sea level rise or other changed circumstances are borne by the applicant enjoying the benefits of new private development and not the public.

The proposed development is located in an area where dynamic and unpredictable coastal hazards exist that could adversely impact the development should the predictions of flooding and sea level rise prove to be inaccurate. Furthermore, as discussed below, the project site is also located in an area subject to geologic hazards,

such as liquefaction. Therefore, the Commission also imposes **Special Condition 2**, which requires the applicant to assume the risk of development and waive any claim of liability on the part of the Commission. 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.

In addition, the Commission imposes **Special Condition 8**, which requires the applicant to record a deed restriction on the property. **Special Condition 8** imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser and any future owners of the site with recorded notice that the restrictions are imposed on the subject property.

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. According to the applicant's soil study, the subject site is approximately 1.5 kilometers south of a trace of the Freshwater Fault and approximately 3 kilometers north of the Little Salmon Fault, both of which are considered active thrust faults. Thrust faults are low angle faults that build up considerable horizontal stress before they fail and can generate large seismic events. Although relatively infrequent, high-intensity ground shaking, liquefaction, and tsunamis are some of the seismic hazards with the potential to occur at the site.

To address seismic hazards, the applicant's consultant completed a soil study on the site to determine the types of materials present and recommendations for site development criteria for the proposed project. The resulting report (S.E.E. Engineering, Exhibit 6) concludes that the project site is in a relatively stable area with respect to land sliding but is at risk of liquefaction in the event of a major earthquake. The report provided recommendations for new development related to foundation design and redirection of surface drainage.

To ensure that the development adheres to the engineering recommendations included in this report, **Special Condition 1** requires that all final design and construction plans, including site preparation, foundation design, and drainage plans, be consistent with the recommendations in the applicant's engineering report.

Further additions to the remodeled development that might be proposed in the future would also be at risk of liquefaction in the event of a major earthquake. Improvements to existing single-family residences are often exempt from the need to obtain a coastal development permit under section 30610(a) of the Coastal Act, and in such situations, the Commission would not be able to review such development to ensure that risks to life and property from geologic hazards including liquefaction are minimized. To avoid impacts to coastal resources from the development of otherwise exempt additions to existing structures, section 30610(a) 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 section 30610(a), the Commission adopted section 13250 of Title 14 of the California Code of Regulations, which specifically authorizes the Commission to require a permit for additions to existing structures that could involve a risk of adverse environmental effects. As noted above, certain additions or improvements to the approved remodeled residence could involve a risk of adverse impacts on the site. Therefore, in accordance with provisions of section 13250(b)(6) of the Commission's regulations, the Commission imposes **Special Condition 6**, which requires a CDP or a permit amendment for all additions and improvements to the structure on the subject parcel that might otherwise be exempt from coastal permit requirements. This condition will allow future development to be reviewed by the Commission to ensure that future improvements will be sited and designed to minimize risks from liquefaction and other hazards.

Tsunami Hazards

While the northern portion of the property lies within the California Geological Survey (CGS) mapped Tsunami Evacuation Area, the site of the existing residence and proposed improvements is located on a higher portion of the property outside of the Tsunami Evacuation Area. Furthermore, the proposed development is outside of the area shown on the CGS Tsunami Inundation Map[6] as vulnerable to tsunami runup from several extreme, infrequent, and realistic tsunami sources.

Conclusion

The Commission finds that the proposed development, as conditioned, is consistent with section 30253 of the Coastal Act, because the permitted development will minimize risks to life and property, assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.

F. Protection of Coastal Waters

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. Section 30231 states:

> 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.

[6] https://www.conservation.ca.gov/cgs/Documents/SHP/Tsunami/Inundation/Maps/Eureka-Inundation-SECURED.pdf

There are no creeks or watercourses on the property, although the property adjoins Eureka Slough. The proposed improvements will expand the house footprint 8 feet northward (towards the slough) and 3 feet eastward (towards the adjacent undeveloped lot). The proposed improvements also include a new covered porch that will extend an additional 12 feet northward. The expanded house footprint will be approximately 96 feet away from the water's edge at its closest point. The home improvements and expansion will create approximately 500 square feet of new impervious surfaces as part of the project (residential expansion, expanded driveway, and new garage). Given the development's distance from slough waters and the significant permeable areas between the residential structures and the water, there is sufficient area to allow for onsite infiltration of stormwater runoff. Moreover, because the project involves no grading or vegetation removal over the gradually sloping property, there is very little chance that sediment-laden runoff originating from the development site will flow from the property into Eureka Slough.

Nevertheless, to ensure that the applicant adheres to appropriate construction-related best management practices (BMPs) for dust control and other water quality protection measures employed to prevent sedimentation of slough waters, the Commission imposes **Special Condition 5.** This condition requires, in part, the proper disposal of construction-related debris, the covering of stockpiles whenever there is a potential for rain to prevent polluted water runoff from the site, and the use of appropriate BMPs for erosion and runoff control as detailed in the current California Storm Water Quality Best Management Handbooks.

Therefore, the Commission finds that the proposed project, as conditioned, will protect the quality of coastal waters and estuaries and is consistent with section 30231.

G. Visual Resources

Section 30251 of the Coastal Act states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. This section requires, in applicable part, that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, and to be visually compatible with the character of surrounding areas.

The project setting is an urban residential neighborhood with existing shrubbery and trees lining the streets surrounding the developed lots. There are no views of Eureka Slough through the property from the public roadway (North Street). Eureka Slough is occasionally used by kayakers and other users of small water-craft, and thus provides another public vantage point with views of the project site. The proposed new maximum 26-foot-tall addition, which will be visible from North Street and Eureka Slough, will be of similar design to the existing residence (wood and metal siding and metal roofing) and compatible with similar two-story residences in the surrounding neighborhood. In addition, the expanded and remodeled structure will be set back approximately 100 feet from the shoreline, a similar distance as the existing house and other houses in the immediate vicinity, and thus will not significantly impact views from the water.

As discussed above, the building site is located on level ground, and no grading or major vegetation removal is proposed that would result in significant natural landform alteration.

Although the development is compatible with the surrounding development, it is located adjacent to a natural, undeveloped area (Eureka Slough channel). While no exterior lighting is proposed as part of this project, if exterior lighting is erected in the future on the permitted improvements (e.g., on the second-story addition and deck) in a manner that would illuminate the nearby, naturally dark natural area, there is potential for the improvements to degrade the dark nighttime character of the area. Accordingly, to prevent the cumulative impacts of light pollution on the visual and biological resources of the area, the Commission imposes **Special Condition 3**, which requires that all exterior lighting associated with the proposed development be low-wattage, shielded, and downcast such that no light is directed beyond the bounds of the property or into the adjoining Eureka Slough habitat. These lighting requirements will also reduce glare effects on users of small water-craft on the slough.

In summary, the proposed development as conditioned is consistent with section 30251, as the development will not adversely affect views to or along the coast, result in major landform alteration, or be incompatible with the character of the surrounding area.

H. Protection of Archaeological Resources

Coastal Act section 30244 states as follows:

> 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 the Wiki division of the Wiyot tribe. At the time that Euro-Americans first made contact in this region, the Wiyot lived almost exclusively in villages along the protected shores of Humboldt Bay and near the mouths of the Eel and Mad Rivers. Today, representatives of the Wiyot Tribe include the Table Bluff Reservation Wiyot Tribe, the Blue Lake Rancheria, and the Bear River Band of the Rohnerville Rancheria.

Commission staff referred the project to the Tribal Historic Preservation Officers (THPO) for the Wiyot area Tribes listed above. No comments were received from the THPOs.

No known archaeological resources are located on the site. Nevertheless, to ensure protection of any archaeological resources that may be inadvertently discovered at the site during ground-disturbing activities associated with the proposed development, the Commission imposes **Special Condition 4**. This condition requires that if an area of cultural deposits is discovered during the course of the project, all construction must cease. To recommence construction following discovery of cultural deposits, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director, who determines whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act section 30244, as the development includes reasonable mitigation measures to ensure that construction activities will not result in significant adverse impacts to archaeological resources.

I. Public Access

Section 30210 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 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 requires that development not interfere with the public's right of access to the sea where acquired through use or legislative authorization. Section 30214 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 these sections, the Commission considers whether public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

The subject lot is located between Eureka Slough, considered to be an arm of the sea, and the first through public road. The closest public access point from the property to Eureka Slough is the City of Eureka's Waterfront Trail, approximately .75 miles to the west. There is no evidence of public use of the subject property for public access, no evidence of trails on the property, and no indication that the site has been used for public access purposes in the past. The proposed development will not increase the demand for public access to the shoreline, as it involves improvements to an existing developed single-family residential lot. For all of these reasons, the Commission finds that the proposed project, which does not include provision of public access, is nevertheless consistent with the public access policies of the Coastal Act.

J. California Environmental Quality Act (CEQA)

The County of Humboldt, as the lead agency, determined the project to be categorically exempt from environmental review pursuant to sections 15301 of CEQA guidelines (Existing Facilities) and 15061(b)(3) (Common Sense Exemption).

Section 13096 of the Commission's regulations requires Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirement of the 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 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 project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, 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 development, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A

Application File for CDP Application No. 1-20-0360

County of Humboldt Local Coastal Program