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Kristen Goetz, Principal Planner
City of Eureka
531 K Street
Eureka, CA 95501

RE: Comments on the City of Eureka, Draft LCP Ch. 5 Natural Hazards and Shoreline Structures.

Dear Ms. Goetz:

Thank you for the opportunity to review and comment on the City's proposed update to the Local Coastal Program (LCP) Land Use Plan (LUP). As you know, the LUP is a key regulatory tool that implements the statewide goals and policies specified in the California Coastal Act to protect, restore, and enhance coastal resources at the local level, including by specifying the kinds, locations, and intensities of allowed development and applicable coastal resource protection requirements. The City's current LCP update process offers a critical opportunity to ensure that the LCP continues to reflect the needs and goals of the City, particularly as they relate to changing conditions in response to climate change and sea level rise.

To that end, Commission staff offers the following comments on Chapter 5 of the City's Draft LCP update related to Natural Hazards and Shoreline Structures. As indicated throughout the below discussion, these comments are offered as a starting point for continued coordination with the City. Commission staff is available to continue discussions about specific adaptation approaches and related LCP policy language, as well as ensuring the City's proposed LCP is consistent with the Coastal Act while reflecting locally specific conditions and needs.

1) **Shoreline Protective Structures.** A variety of the proposed policies seem to allow for or encourage a continued reliance on shoreline protective structures throughout the City's shoreline, specifically by calling for the maintenance and enlargement of such structures (including, *e.g.*, CHS-1.6, CHS-1.8, CHS-1.15, CHS-1.16). As currently written, such policies appear to conflict with Coastal Act policy 30235, which limits the use of shoreline protective structures to specific circumstances, including when required to serve coastal-dependent uses or to protect existing structures in danger from erosion (which the Commission has generally taken to mean existing at the time the Coastal Act went into effect in 1977), as well as Coastal Act policy 30253 which requires new development to be sited such that it does not require the construction of a shoreline protective device.

While shoreline protective structures may be necessary in certain circumstances, the Coastal Act limits the use of shoreline protective devices because of the negative impacts they can have on coastal resources, including by disrupting shoreline processes. In particular, as sea levels rise, these structures act as a barrier to the migration of natural habitats, resulting in their drowning and eventual loss. In recent years, the Coastal Commission has taken a strong approach towards limiting continued reliance on shoreline protective devices in favor of alternative strategies that would ensure protection of coastal habitats and resources even as sea levels rise. At the same time, the Commission recognizes the threats posed by sea level rise and the need to ensure that risks to current development, including critical infrastructure, working waterfronts, and other key assets, are minimized. It is understood that a variety of adaptation approaches, including shoreline protective devices, will be necessary to address sea level rise, and that such approaches will need to reflect the specific conditions of different jurisdictions.

In recognition of these factors, staff strongly recommends inclusion of a policy related to shoreline protective structures that closely matches the language of Coastal Act policy 30235, which would limit the use of shoreline protective structures as an overall approach. Additionally, in all relevant policies, language should be clear that, where allowable, shoreline protective devices must be the least-environmentally damaging feasible alternative and impacts to coastal resources shall be minimized and mitigated. Along with the already included policy CHS-1.9 related to design requirements, additional policies related to monitoring for impacts to coastal resources, limiting the authorization duration of shoreline protective structures, and in some cases requiring eventual removal (such as when the structures being protected are removed), would help to ensure that impacts from shoreline protective devices are minimized even as conditions change. Commission staff is available to provide suggested language and/or to work with the City to develop such policies.

While the overall approach should be to limit shoreline protective devices, it will also be appropriate to include a secondary set of policies that would allow for shoreline protective devices under more specific circumstances, such as in specific parts of the shoreline or to protect specific assets over a certain time period, while encouraging alternative strategies elsewhere. This sort of two-pronged approach can help ensure consistency with the Coastal Act while also recognizing the need for flexibility in addressing sea level rise hazards, particularly over the short- and medium-term. City staff has indicated that some work has been done to identify a variety of adaptation approaches that could be implemented in different areas, which may provide some direction about where protective devices are needed as compared to alternative strategies. Pulling more of this information into LCP language will help provide a clearer picture of the City's intended approach. It may also help ensure consistency with the proposed policy CHS-1.13, which encourages the preservation and habitat enhancement of natural shoreline areas, but currently lacks greater specificity. Commission staff would like to continue coordinating with

the City on this type of approach to ensure consistency with Coastal Act requirements.

2) **Siting and Design Requirements and Best Available Science.** The two proposed policies related to siting and design of new or substantially improved development (CHS-1.10 and 1.12) lack some of the specificity that is included in the current LCP. For example, Policies 7.B.4, 7.B.5, and 7.D.1 of the current LCP all include specific requirements for how to minimize hazards or require submittals of various hazards reports. Is there a reason this level of detail was removed from the proposed policies? At a minimum, Commission staff recommends incorporating the need to consider projected sea level rise over the life of the development in these policies.

3) **Adaptation Planning.** The draft LCP includes a variety of policies that relate to the need to continue evaluating and developing various adaptation strategies, including prioritizing development and implementation of strategies to protect key assets (CHS-1.14), establishing and maintaining a protection system for low-lying areas (CHS-1.15), developing a protection management strategy (CHS-1.16), relocating development when it can no longer be protected (CHS-1.18), and exploring strategies to reduce damage from peak tidal and storm events (CHS-1.19). Many of these policies seem to require additional research, feasibility studies, adaptation triggers and so on, so it may be helpful to combine these into a single, unified, adaptation planning program to more specifically guide the City's future efforts. Staff also recommends refining and/or adding to this language to clarify that a variety of adaptation strategies ranging from soft, nature-based adaptation strategies to harder shoreline armoring should be considered. As discussed in the recent coordination meeting, the Commission's LCP Grant Program may be an appropriate funding source to further develop some of these ideas.

   Relatedly, Policy CHS-1.17, Fill Material in the Bay, encourages the placement of safe fill material in the Bay to protect development from flooding and erosion. As currently written, this may conflict with Coastal Act Policy 30233 which limits fill to specific circumstances. It may be appropriate to instead re-frame this policy around identifying options for the use of living shorelines, horizontal levees, or other nature-based adaption strategies, and coordinating with the Coastal Commission and other relevant stakeholders on questions related to the use of fill material in coastal waters, as part of the City's continued adaptation planning efforts.

4) **Disclosure Requirements.** Policy CHS-1.21 encourages the disclosure of the potential for sea level rise impacts, such as through risk disclosure requirements. Commission staff recommends strengthening this approach by including a policy that all new development or substantial improvements in hazardous areas be conditioned to require a risk disclosure related to sea level rise hazards, as well as the possible need for future adaptation to address such risks, up to and including removal of a threatened structure.

In closing, we commend the City for moving forward with updating the LCP and we look forward to further collaboration, including to help the City refine the draft LCP as discussed in this letter. If you have any questions or would like to discuss these matters further, please don't hesitate to contact me.

Sincerely,

Kelsey Ducklow

Kelsey Ducklow
LCP Grant Program Coordinator & Climate Change Analyst

Earlier Draft Policies Referenced in Coastal Commission Letter

Fire

CHS-1.1. Fire Hazard Protection. Protect Eureka residents, visitors, property, and natural resources from injury and loss of life from fire hazards.

CHS-1.2. Urban/Wildland Interface. Design and construct new development proposed within or adjacent to fire hazard zones, such as the gulches and greenways, to minimize exposure to fire hazards and facilitate fire suppression efforts in the event of a wildfire.

Seismic and Geologic Hazards

CHS-1.3. Seismic and Geological Hazards Protection. Protect property, critical facilities, and human life from seismic and geological hazards.

CHS-1.4. Shoreline Geologic Hazards. Ensure that development on or near the shoreline of Elk River, Humboldt Bay, and Eureka Slough does not create, contribute significantly to, or is subject to, high risk of damage from shoreline erosion or geologic instability over the life span of the development.

Flooding

CHS-1.5. Flood Hazard Protection. Reduce risk of loss of life, injury, damage to property and economic and social dislocations resulting from flood hazards.

CHS-1.6. Flood Protection Structures. Maintain and enlarge existing flood protection structures to protect development and sensitive habitat or species from flood hazards.

CHS-1.7. Climate Change. Monitor, assess, and adapt to changes in stream, river and coastal flooding characteristics that may occur due to a global climate change induced rise in sea level.

Seal Level Rise and Shoreline Structures

CHS-1.8. Maintain and Enlarge Shoreline Protective Structures. Maintain and enlarge existing shoreline protective structures to protect development from sea-level rise related hazards, including storm events, wave run-up and coastal erosion.

CHS-1.9. Design of Shoreline Protective Structures. Require shoreline protective structures be designed for multiple urban purposes, connect to the public access system, ensure shore and structural stability, limit impacts on coastal resources, incorporate soft coastal protection, minimize aesthetic impacts and neither create nor contribute significantly to erosion, or cause geologic instability.

CHS-1.10. New Development. Require new development along the shoreline to assure stability and structural integrity, neither create nor contribute significantly to erosion, not cause geologic instability or destruction of the site and surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs, and ensure that risks to life and property are minimized and that new development is safe from and does not contribute to flooding.

CHS-1.11. Construction Altering Natural Shoreline. Revetments, breakwaters, groins, harbor channels, seawalls, retaining walls, levees, docks, rock slope protection, and other such construction that alters natural shoreline processes will be permitted when required to serve areas containing coastal dependent uses, areas containing visitor serving uses, and to protect existing structures in danger from erosion or inundation. Existing marine structures will be permitted to be upgraded where feasible.

CHS-1.12. Raise Structures. Require development and substantial improvements to existing development which are located in areas not protected from coastal flooding to have raised structures to minimize risks to life and property.

CHS-1.13. Natural Shoreline Areas. Encourage the preservation and habitat enhancement of natural shoreline areas as identified in the most recent shoreline mapping assessment.

CHS-1.14. Protect Key Coastal Assets. Prioritize the development and implementation of adaptation measures to protect key coastal assets.

CHS-1.15. Coordinated Protection System. Establish and maintain a coordinated Sea Level Rise protection system for low lying areas. Consider establishing an Assessment District to fund the maintenance and improvement of coastal flood protection measures.

CHS-1.16. Protection Management Strategy. Protect developed areas and areas designated for urban uses by maintaining and enlarging existing shoreline structures, addressing gaps in the City's coastal flooding lines of defense, and periodically updating and amending sea-level rise vulnerability assessment, adaptation plans, and mapping based on best available science until such time as the magnitude of sea-level rise is such that the protection management strategy can no longer be achieved.

CHS-1.17. Fill Material in the Bay. Place safe fill material in the Bay to protect existing and planned development from flooding and erosion.

CHS-1.18. Relocate Development. Abandon developed areas if it is determined it is no longer feasible to construct and maintain shoreline structures from the effects of sea-level rise. Modify or remove shoreline protective structures if currently developed areas are abandoned and development is relocated outside the coastal hazard area.

CHS-1.19. Reduce Damage from Peak Tidal and Storm Events. Explore and encourage innovative solutions to reduce damage from peak tidal and storm events, including the installation of hard engineered tidal barriers, installation of temporary sea gates, pump stations and off-shore structures, construction of soft engineered islands, reefs, marshes, and living shorelines, utilization of safe local waste material to implement adaptation measures, and construction of stormwater detention basins.

CHS-1.20. City Projects. Integrate resilience to anticipated sea level rise impacts into City project designs when repairing and replacing aging infrastructure.

CHS-1.21. Disclose Sea-level Rise Impacts. Disclose the potential for sea-level rise impacts with the use of the following tools: implementation plan requirements, sea-level rise hazard maps based on best available science, and risk disclosure requirements.

CHS-1.22. Education. Work with community partners, property owners, and managers of assets at risk to enhance local understanding of sea-level rise and identify Best Management Practices that reduce vulnerability and risk from sea-level rise hazards.

CHS-1.23. Collaboration. Collaborate with stakeholder groups, other agencies, local tribes, and the public to develop local and regional strategies that collectively improve the community's ability to adapt to sea-level rise in ways that advance or maintain economic prosperity, social equality, and environmental protection.