AGENDA DATE: December 12, 2016

EUREKA CITY PLANNING COMMISSION

TITLE: Sea Level Rise Goals, Policies, and Regulations

DEPARTMENT: Development Services, Planning Division

PREPARED BY: Robert Holmlund, Director

PRESENTED FOR: ☐Action ☐Information only ☒Discussion

RECOMMENDATION

Receive report, open the meeting for public comment and provide discuss the potential sea level rise goals, policies, and regulations the City may consider including in our Local Coastal Program amendment.

DISCUSSION

Objective: The objective of the agenda item is to fulfil the sea level rise adaption grant requirement that the City hold a public meeting on the draft goals, policies, and regulations.

Background: In 2014, the City received a grant from the California Ocean Protection Council to assist the City to develop sea-level rise (SLR) adaptation strategies and policies for the City of Eureka's Land Use Plan (LUP), a component of the Local Coastal Program (LCP), which is being updated as part of the City's 2040 General Plan Update. City Planning and Public Works Staff worked with consultants engaged in the City's General Plan Update and regional SLR Adaptation Planning Project. The Project Team conducted a SLR risk analysis based on the inundation mapping already completed for the Humboldt Bay region. An Adaptation Planning Report was also prepared based on the Risk Analysis Report. The report was presented to the City Council in November.

The Adaptation Planning Report that was presented to the City Council included potential adaptation strategies that the City might consider implementing as it plans for future development in the General Plan/Land Use Plan update process. The grant requires that the final product include draft goals and policies. The final product is required to be submitted by 12/31/16. The purpose of this item is to receive public comment on the draft goals and policies. The Planning Commission and public will have additional opportunities to review and comment the goals, policies, and regulations during the drafting of the General Plan/ Land Use Plan update process.

EUREKA LOCAL COASTAL PROGRAM
LAND USE PLAN
SEA LEVEL RISE AND SHORELINE EROSION

GOAL SLR 1

Preserve, enhance, and restore the shoreline while protecting public access, scenic quality, natural resources, critical public infrastructure, and existing development from coastal hazards.

SLR 1.1 Structures. Shoreline structures (boardwalks, seawalls, revetments, piers, docks, marina's, dikes, levees, and other structures) shall:

a. be designed for multiple urban purposes such as flood protection, transportation, public access trails, wastewater management, recreation, wildlife, nature, and tourism wherever practical.
b. incorporate an interconnected system of public access trails, boardwalks, and viewpoints wherever practical.
c. assure shore stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.
d. avoid, minimize, and mitigate impacts on environmentally sensitive habitat areas, public recreation, coastal access, and navigation.
e. incorporate soft coastal protection such as engineered "living shoreline" or fringe salt marshes where practical to reduce wave run up, coastal erosion, and reduce the height of hard shoreline structures. Soft coastal protection shall not diminish navigation or recreational activities on the bay.
f. include vegetation and other features designed to soften rock revetments, rock boulders rip rap, or other hard armoring structures and make them more atheistically pleasing wherever practical.

SLR 1.2 Preserving Undeveloped Shorelines: The City shall encourage the preservation and habitat enhancement of natural shoreline areas that were identified in the 2013 shoreline mapping assessment as these areas are vulnerable to future flooding and contain significant habitats or species and are especially suitable for ecosystem enhancement.

SLR 1.3 Fill Material in Bay. Safe fill material such as dredge spoils, rock, and oyster shells may be placed in the Bay to protect existing and planned development from flooding as well as erosion.

SLR 1.4 Adaptation Measures. As per the Coastal Act and common sense, the City shall prioritize developing and implementing adaptation measures to protect the following assets:

a. Public Coastal Access Points identified in the General Plan (Coastal Act Section 30210).
b. Eureka Waterfront Trail from the Elk River to Humboldt Bay Trail near Highway 101 (Coastal Act Section 30210).
c. Commercial Fishing and Recreational boating facilities (Coastal Act Section 30234 and 30220).
    1. Marina
        i. Woodley Island Marina
        ii. Eureka Public Marina
    2. Docks

i. Humboldt Bay Rowing Association Dock (Samoa Bridge)
ii. Bonnie Gool Dock (Adorni Center)
iii. F Street Dock (Boardwalk)
iv. Coast Guard Dock (Commercial Street)

3. Boat Ramps
   i. Samoa Bridge Boat Ramp
   ii. Eureka Public Marina (500 W Waterfront Drive)

d. Coastal Visitor Serving Uses (Coastal Act Section 30235)
e. Coastal Dependent Uses and Existing Structures (Coastal Act Section 30235).
   1. Coastal Dependent Industrial Uses.
   2. Waterfront Commercial.
   3. Use Existing Structures.
f. Environmentally Sensitive Habitat Areas (Coastal Act Section 30240)
g. Agricultural Lands (Coastal Act Section 30242).
h. Cultural, Archaeological and Paleontological Resources (Coastal Act Section 30244).
i. Wastewater Treatment Plant and Associated Facilities (Common Sense).
j. Highway 101 north and south (Common Sense).
k. Other Critical Infrastructure as established by the City Council (Common Sense).

SLR 1.5 **Removal of Shoreline Protective Structures**. If the "tipping point" is reached at a specific location and it is determined that it is no longer feasible to construct and maintain shoreline structures from the effects of sea level rise, the City may need to abandon certain developed areas. If currently developed areas are abandoned, and development is relocated outside of the coastal hazard areas, existing shoreline protective structures will either modified into a revised adaptation measure or be removed to allow natural processes and responses to sea level rise.

GOAL SLR 2:
Protect all lands currently developed with urban growth and all undeveloped lands designated for urban uses that provide valuable infill development opportunities until the magnitude of Sea Level Rise change is such that the protection management strategy can no longer be achieved.

SLR 2.1 **Existing Shoreline Structures.** To protect development located behind the shoreline from storm events, wave run-up, and coastal erosion; the existing shoreline structures (boardwalks, seawalls, revetments, piers, docks, marina's, dikes, levees, and other structures) shall be maintained and enlarged. To protect development from potential shoreline erosion and flooding hazards the City shall utilize the projected 2100 low intermediate model 100-year storm event projection of 2.7 feet (12.5 NAVD 88) plus a minimum of two additional feet (one foot for waves and one foot safety).

SLR 2.2 **Gaps in Lines of Defense.** Low points and gaps in the City's coastal flooding lines of defense shall be identified and tied into either higher existing land or be continued to avoid "back door" flooding.

SLR 2.3 **New Shoreline Structures.** New development along the shoreline shall assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.

SLR 2.4 **Development Not Protected by Shoreline Structures:** New development and substantial improvements to existing development located in areas that are not protected from

coastal flooding as established by Policy SLR 2.1 shall be designed and constructed to minimize risks to life and property due to flooding. These potentially unprotected structures shall have a finish floor elevation one foot above the following low intermediate model MMMW (NAVD 88) elevation:

Type	Elevation Established by SLR Model Year	RSLR (Feet)	NAVD 88 (Feet)	Structure "Expected Life"	Structure "Expected Life" Applies To These Structure Types
A	2050	0.5	8.6	Less than 25 years	Temporary structures, ancillary development, amenity structures, and other development with an expected life of less than 25 years.
B	2070	0.9	9.2	25 to 75 years	Permanent commercial, industrial, and other non-critical facilities type projects.
C	2100	2.7	10.4	Greater than 75 years	Permanent residential and critical facilities such as wastewater treatment facilities, arterial roadways, hospitals, power substations, police, and fire stations.

SLR 2.5 Vulnerability Assessment, Adaptation Plans, and Mapping. The City's Flood Administrator shall periodically update and amended, as necessary, the sea level rise vulnerability assessment, adaptation plans, and mapping periodically based on the best available science warranting significant adjustments to established projections.

GOAL SLR-3

Utilize the best available science, planning, and engineering to identify and disclose the potential for sea level rise impacts, well in advance, so that we can design and implement adaptation measures to minimize the risk of any actual future hazard.

SLR 3.1 Safety of New Development. The City will review projects and establish appropriate standards in the zoning code to:

a. Ensure that risks to life and property are minimized and that new development is safe from and does not contribute to flooding.
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. (NOTE CA Section 30253)

SLR 3.2 Potential SLR Maps. Potential Sea Level Rise Map: Sea level rise flooding areas are defined as those areas that have the "potential" to be subject to flooding as modeled utilizing the low intermediate greenhouse gas emissions scenario as determined by the Humboldt Bay: Sea Level Rise Hydrodynamic Modeling, and Inundation Vulnerability Mapping (Northern Hydrology and Engineering 2015) as recommended by the Coastal Commission in their Sea Level Rise Guidance Document 2016. The map shall be reviewed to determine if a proposed development is in an area of potential current or future high coastal flooding. The areas identified on the map are not an indication of a definite hazard on a specific parcel. It is possible that

hazards may exist outside of the mapped area. If a specific study indicates that a hazard does not exist on a property that is within the mapped hazard area, development can proceed as if the property were not located within that mapped hazard area. The maps shall be based on the best available science and updated when new information warranting significant adjustments to projections becomes available. (Figure X).

SLR 3.3 Specific Study Requirement. For development proposed within a mapped hazard area, the zoning code will identify any specific study requirements that are needed to document any specific construction standards; minimum floor elevations; and to ensure that shoreline development will not create a hazard.

SLR 3.4 Applicant's Assumption and Disclosure of Risk. To ensure that future property owners are notified that their property is in a hazard area, development approval for projects located in hazardous areas shall be required to record on title a risk disclosure notice. The zoning code shall establish the minimum required risk disclosures requirements.

GOAL CH 4
Collaborate with other agencies and the public, to develop local and regional strategies to collectively improve our ability to adapt to sea level rise in ways that advance economic prosperity, social equality, and environmental protection.

CH 4 1 Stakeholder Collaboration. The City shall actively encourage, lead, and/or participate in collaborative stakeholder group(s) that includes critical asset owners, property owners, shoreline protective structure managers and business owners, regulatory agencies and interested public to develop bay wide, watershed, drainage basin, and project specific multipurpose sea-level rise adaptation strategies and measures.

CH 4.2 Innovative Solutions. The City will explore and encourage innovative solutions to reduce peak tidal and storm events thereby reducing the vulnerability and risk from tidal inundation. Potential regional solutions may include by are not limited to:

a. installing hard engineered tidal barriers at the Humboldt Bay entrance, Eureka Slough entrance, and/or between Indian, Woodley, and Daby Islands that allow continued navigation, fish passage, and sediment transport while allowing temporary sea gates, pump stations, and offshore structures to be put in place.
b. constructing soft engineered islands, reefs, marshes, living shorelines or other features which mimic natural process and shoreline protection by filling portions of Humboldt Bay.
c. utilizing oyster shells, navigation channel dredge spoils and other safe local waste material to implement adaptation measures inland, along the shoreline, and within the waters of Humboldt Bay.

CH 4.3 Education. The City will work with community partners to educate the community about sea-level rise hazards and property owners, land, and water managers about how to implement best management practices that reduce vulnerability and risk from sea-level rise and flooding hazards.

CH 4.4 Research and Funding. The City will encourage state and federal agencies to research and fund sea level rise projections, tidal inundation mapping for Humboldt Bay, and adaptation construction projects.

CH 4.5 Flexibility in Decision Making Process. The City will encourage the State Legislature to adopt revisions to the California Coastal Act and other laws which require the California Coastal Commission and other agencies to implement a flexible approach to approving reasonable sea level rise adaption projects that are based on the best available science, but may not strictly meet every Coastal Act and/or other government regulation.

CH 4.6 Beach and Dune Nourishment. The City will encourage the U.S. Army Corps of Engineers and other State and federal agencies to develop and implement a beach nourishment programs to ensure that the region's beaches and dunes remain intact as they are our regions outer front line of defense.

CH 4.7 North and South Harbor Entrance. The City will encourage the Humboldt Bay Harbor, Recreation, and Conservation District, U.S. Army Corps of Engineers, and other State and federal agencies to maintain and enhance the North and South Jetty's to ensure that harbors entrance is safe for continued navigation.

CH 4.8 Cultural Resources. The City will work with our local tribes to protect the areas cultural resources from the effects of sea level rise and coastal flooding.