

CALIFORNIA COASTAL COMMISSION

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CALTRANS INFORMATIONAL BRIEFING

APPENDICES

[Appendix A – CDP 1-18-1078 Special Conditions 1 and 2](#)

APPENDIX A
CDP 1-18-1078 Special Conditions 1 and 2

1. Sea Level Rise and Flooding Impact Monitoring and Reporting.

A. Baseline Report. The Permittee shall submit a baseline report to the Executive Director by May 1, 2020 that:

1. Identifies the following water elevation information at the North Spit Tide Gauge (based on current tidal datums from NOAA and/or other applicable data identified by the Permittee, and referenced to NAVD88): Mean Sea Level, Mean Monthly Maximum, and the highest observed tide.
2. Identifies sites from which to take photographs on an annual basis during King Tides and/or other extreme tidal events to show changing site conditions over time. These sites shall include locations that allow for photo documentation at the most vulnerable areas of each segment of the Highway 101 Corridor. The baseline report shall include photos of the King Tide events occurring during the winter of 2019-2020.

B. Annual Reports. The Permittee shall submit annual monitoring reports to the Executive Director by May 1st of every year starting in 2020 and continuing until the CDP amendment required by Special Condition 2 has been acted upon by the Commission. These annual reports shall be presented to the Commission and shall document all of the following for the Highway 101 Corridor:

1. **Water Elevation Data:** Using NOAA tides and currents or other applicable data from the North Spit Tide Gauge, document annual and monthly maximum water elevations, the mean monthly maximum, and the mean sea level over the two-year reporting period. Describe how these elevations are different from the baseline report and any previous monitoring reports and identify if any new record maximum elevations have been reached.
2. **Coastal Hazards Impacts:** Provide a description of any temporary or ongoing flood, erosion, or other coastal hazards impacts to highway infrastructure in the Highway 101 Corridor during the reporting period. Include documentation of the dates, duration, and location of any hazards impacts, as well as a description of the conditions causing impacts (e.g., King Tides, storms, overtopping and/or breaching of dikes, tide gate failures, groundwater and/or drainage issues, or any combinations of the same). Reporting should include a qualitative description of impacts, including narratives of events with maps and photos (including photos of King Tide and other extreme tidal events), as well as quantitative information such as flood depth, as applicable and feasible.

3. **Adaptation and Hazards Response:** Describe any effects on highway function and the actions that were taken to address temporary hazards impacts during the reporting period (e.g., road closures/reroutes; repairs to damaged infrastructure) as well as any repair and maintenance activities performed by the Permittee or known to the Permittee to have been performed by other entities to repair dikes or berms that protect the highway corridor from flooding impacts within the Highway 101 Corridor. Include photographs as well as any information on damage/repair costs.

In addition, describe any planned responses to coastal hazards that may need to be implemented before the next monitoring cycle to address anticipated impacts (e.g., dike repair, temporary detour/contingency plans, or other similar strategies) and include a plan for submitting any necessary amendments to CDP 1-18-1078, or separate CDP applications, that are necessary for those planned responses.

4. **Adaptation Plan Progress:** Document the Permittee's progress in developing the Comprehensive Adaptation and Implementation Plan (CAIP) required by Special Condition 2 including: (a) updates on the actions the Permittee has taken to develop the final CAIP and compliance with the deadlines required by Special Condition 2; and (b) the actions the Permittee has taken to coordinate with the local governments, relevant public interest groups, and other relevant stakeholders.
 5. **Flood Events:** Document every time any travel portion of the Highway 101 Corridor has been closed due to flooding during the reporting period.
- C. Frequent Flood Event Reports. Every time flooding causes closure of any travel portion of the Highway 101 Corridor within 12 months of any previous closure of any travel portion of the Highway 101 Corridor due to flooding, the Permittee shall inform the Commission in writing within 30 days of the closure. The frequent flood event report shall be submitted in addition to the documentation of flood events to be included in the Annual Reports required above.

2. **Long-Term Sea Level Rise Comprehensive Adaptation and Implementation Plan and Required CDPA.**

- A. Comprehensive Adaptation and Implementation Plan. The Permittee shall submit a Comprehensive Adaptation and Implementation Plan (CAIP) by December 31, 2025 or within one year of the time that flooding closes any travel portion of the Highway 101 Corridor 4 times a year over any 12-month period, whichever comes first. The CAIP shall identify a suite of strategies necessary for protecting, relocating, or otherwise adapting the development authorized by CDP 1-18-1078 as necessary to maintain safety from flooding and other coastal hazards in order to minimize risk and assure stability and structural integrity in the long-term (at least through 2100). The CAIP shall

reflect the outreach, education, and coordination with the ongoing long-term planning efforts of Humboldt County and the cities of Eureka and Arcata, and shall also reflect coordination with the Humboldt County Association of Governments, relevant public interest groups, and other relevant entities. The CAIP shall include:

1. An analysis of current and future coastal hazards in the Highway 101 Corridor, including flood and erosion hazards caused by overtopping wave impacts, elevated groundwater and/or reduced or inadequate drainage that: (a) takes into account local sea level rise through at least 2100, considering medium-high risk aversion and extreme risk aversion scenarios, and based on the best available science at the time of plan preparation; and (b) utilizes the data provided in the annual monitoring reports and flood event reports required by Special Conditions 1(B) and 1(C).
2. An evaluation of CDP amendment alternatives to the development authorized by CDP 1-18-1078 to address any coastal hazard vulnerabilities identified, including but not limited to alternatives involving accommodation strategies (viaducts, overpasses, etc.), protection measures (dikes, living shorelines, or other natural or engineered features), and relocation of the development to an area safe from flooding and other coastal hazards. The evaluation shall describe the specific design elements and adaptation measures, including how different strategies may be used in combination and over time, to ensure the integrity and functionality of the highway system. The information concerning CDP amendment alternatives must be sufficiently detailed to enable the Commission to evaluate the feasibility and Coastal Act consistency of each amendment alternative, including whether the alternatives: (1) minimize risks to life and property of flood and geologic hazards, assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area; (2) ensure the resiliency of the transportation infrastructure; (3) avoid impermissible impacts to wetlands and only involve the feasible least environmentally damaging alternative for any diking, dredging, or filling of wetlands; (4) protect other coastal resources as sea level rise and other natural processes occur; (5) maximize and protect public access and recreation to and along the shoreline in a full multi-modal transportation network; and (6) avoid reliance on hard shoreline armoring or diking. The alternatives evaluation shall include a feasibility analysis that considers all potential constraints, including geotechnical and engineering constraints, project costs, the feasibility of land acquisition and potential funding options.
3. A timetable for implementation of the CAIP based on updated projections of SLR and anticipated impacts from coastal hazards. If adaptation strategies would be implemented in response to defined triggers, such as amounts of sea level rise and/or impacts to highway infrastructure, the timetable should

identify the time horizons over which such triggers are anticipated to occur. The timetable shall take into consideration expected timeframes for any necessary land acquisition, planning, permitting, design, and construction.

- B. CDP Amendment Trigger. The Permittee shall submit to the Commission an application for a CDP amendment within one year of the time that flooding closes any travel portion of the Highway 101 Corridor four (4) times a year over any 12-month period. The CDP Amendment application shall propose to either (a) extend the length of time all or portions of the development is authorized by CDP 1-18-1078 and modify its design as needed to ensure consistency with the Coastal Act, and/or (b) relocate all or portions of the development authorized by CDP 1-18-1078 and modify all or portions of the authorized development's design as needed to ensure consistency with the Coastal Act, and/or (c) remove all or portions of the development authorized by CDP 1-18-1078.
1. The required CDP amendment application shall conform to the Commission's permit filing regulations at the time and shall at a minimum include the long-term sea level rise CAIP required above.
 2. If the CAIP was submitted previously to the Commission pursuant to the deadlines of Part A, above, the Permittee shall update the CAIP or provide an equivalent document prior to submittal of the CDP Amendment application to include the following: (1) an updated analysis of current and future coastal hazards that considers medium-high risk aversion and extreme risk aversion scenarios based on the best available science at the time of preparation of the updated CAIP, (2) an analysis of any additional CDP amendment alternatives identified since preparation and submittal of the original CAIP consistent with the requirements of Part A, above, of Special Condition 2; and (3) an updated timeline for implementation of the CAIP.