

## Likely Implications of Sea Level Rise for North Humboldt Bay, California

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The California State Government Climate Adaptation Report of 2009 uses an estimate for sea level rise of 20-55" by 2100. Coastal areas in California, including the low lying Humboldt Bay Area will be affected. Students in the Humboldt State University senior Environmental Management and Protection Planning Practicum in spring semester 2011 developed an assessment of likely implications of sea level rise for the North Humboldt Bay Area. Students developed a conceptual model of likely implications of sea level rise for this region through a review of the literature and numerous key informant interviews. They interviewed staff from local, state and federal agencies, local elected officials, landowners, business owners and real estate brokers about likely implications and responses. Direct effects of inundation are expected to occur locally with variable severity and at unpredictable rates. Indirect effects will be to the land, water and wetlands and to infrastructure. Students focused in particular on effects to agricultural lands, wetlands and habitat for endangered species, transportation corridors, brownfields, homes and businesses. Additional factors the region will need to cope with are its geographic and political remoteness and constraints posed by existing legislation such as the Coastal Zone Act and Clean Water Act which limit mitigation and retreat due to effects on current wetlands. A mix of local responses is expected from selective mitigation efforts to retreat and adaptation. Responses will need to include changes in local and state policies, fully transparent prioritization of mitigation efforts, adaptation of local planning guidelines and public education and outreach efforts.

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